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The Bradshaw Lecture
ON
THE BIOLOGY OF TUMOURS.

Delivered before the Royal College of Surgeons of England on Dec. 5th, 1912,

BY C. MANSELL MOULLIN, M.A., M.D. OXON., F.R.C.S. ENG.,
CONSULTING SURGEON TO THE LONDON HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—I am not going to attempt a definition of the word tumour. I do not think that it is necessary. The time at my disposal is far too short, and I shall not employ the term in any but its most ordinary acceptation. The structures to which I refer are the growths, familiar to us all, that spring like buds from the normal tissues of the body, the texture of which they imitate more or less closely, draw all their nourishment from them, recognise no limits of size or shape, and never serve a useful purpose of any kind. They are so common that there is scarcely an adult without one, and they become so much more common as age advances that in old people they can often be counted by the score.

ABSENCE OF ANY NATURAL LINE BETWEEN SIMPLE AND MALIGNANT GROWTHS.

Nor shall I attempt to draw any hard and fast line between innocent and malignant tumours. There is no such line. Nature has never drawn one, and though, for our convenience, we separate tumours from each other, and group malignant growths together upon one side, and innocent ones upon the other, between the two there is a borderland of which no man can say to which side the growths belong, nor even whether they do not belong at one time to one side and at another to the other. Every kind of so-called benign tumour, as Bland-Sutton has shown, contains varieties that shade away indefinitely from the type species and at times become malignant. Malignancy is a purely clinical term, and metastasis is merely an accident of growth, absent from what are called benign tumours, not because the cells of which they are composed would not grow if they were disseminated, but because, owing to their having reached a more advanced stage of organisation, they can no longer exercise their primitive power of detachment and auto-transplantation, and therefore never are disseminated unless it is done artificially. The presence or absence of clinical characteristics such as these is not a satisfactory criterion for the classification of pathological growths. The system may have served in days gone by, when facts were few and little was known; but it should be abandoned now.

TUMOURS COMMON TO ALL ANIMALS.

And I shall not confine myself in what I have to say to the tumours that occur in man. Every kind of tumour is met with in other animals, especially in those in which from domestication, or for other reasons, life is prolonged beyond the procreative age. So far as the biology of tumours is concerned, man is merely a highly specialised and much-studied member of a class of mammalian vertebrata distinguished from all others by the ancient zoologists, not perhaps without a suspicion of humour, as Homo sapiens. As such I shall think and speak of him.

NO PROOF THAT TUMOURS ARE CAUSED BY PARASITES.

No proof has ever been brought forward that the structures commonly spoken of as tumours, simple or malignant, are caused by parasites. All that can be said of them for certain is that they grow out from normal tissues like buds, which refuse to be bound by the laws that control the development of the rest of the body. Their behaviour is that of foreign growths, parasitic on the tissues, and their presence is resented and resisted by the tissues among which they lie exactly as if they were foreign growths.

THE ORIGIN OF TUMOURS IN GROWTH UNCONTROLLED BY DEVELOPMENT.

A cell, or a group of cells in some particular part of the body, suddenly breaks off all relation with the rest. Development stops then and there. All idea of function disappears. Henceforth the cells in question never do any work or perform any duties. They have shaken themselves free from all responsibilities. All that they do is to grow and multiply until they build up a formless, shapeless mass, composed of elements resembling in general appearance the tissues from which they have sprung. The only faculty they retain is that of growth—a faculty common to all living tissues so long as they are living; and the measure of their growth is only limited by the supply of food. So long as this continues good, no matter how the rest of the organism fares, they will continue to grow. But the growth of tumours differs from that of all other living structures in that it never serves any useful purpose. Tumours increase in size without aim or object. The cells of which they are composed are functionless. Like true parasites, tumours draw all they require for themselves from the rest of the body, give nothing in return, and thrive while it is being starved. They are the offspring of tissues that are no longer controlled by the laws that govern the growth and development of the body. The first thing, therefore, in considering the question of their biology is to try and form a clear idea of the nature of these laws, their origin, and how it is they can be set aside in this way.

THE LAWS OF DEVELOPMENT.

Their origin dates back almost to the beginning of all things, if not actually to that time when life made its first appearance upon earth, at least to a period so immeasurably remote that it is not in the power of our minds to form a conception of its distance. They came into being when the metazoa came into being, when for the first time the daughter cells of some primitive organism, failing to separate from each other after the parent had divided, as always had been done before, gained the advantage of combination over their fellows and founded the new kingdom. Immeasurably distant as that time is—for the oldest known of these living creatures, already very highly organised, are covered by 60,000 feet of solid rock that has been deposited since they lived—there has been no change since. The laws that regulate the development of Homo sapiens now are the same as those that regulated the development of the hydra or its representative then. Each little mass of cells, consisting, it may be, of only a few units grouped together, whether it constituted the body of some primitive metazoan living in a remote geological epoch or is formed by the division of a mammalian ovum at the present day, obeys these laws.

THE DIVISION OF THE PRIMITIVE ORGANISM INTO GERM AND SOMATIC CELLS.

One of the chief factors that serve to distinguish living organisms from inert matter (though some doubt has been thrown upon this recently) is their power of absorbing and assimilating foreign material, in virtue of which they are able to replace the constant waste of living, increase in size, and when the limits of size are reached, increase in number. Their one aim and object, if such language can be allowed, is to sustain the germ of life and hand it on unimpaired in strength and vigour from generation to generation. In the simplest forms, and in the earliest stages of those more complex, all parts of the organism are endowed with equal powers. Every cell is capable of maintaining its own life, and every cell is capable, either by dividing or by throwing off buds, of maintaining the life of the race. What Weismann called the germ-plasma is shared by all alike. Very soon, however, both in the history of the race and in that of the individual, in accordance with the universal law of the division of labour, a distinction makes its appearance. The cells that compose the organism separate into two groups, distinguished from each other by the differentiation of their work. One of these becomes the germ organ, consecrated to the formation of living germs and the perpetuation of the life of the race. The other which comprises all the rest, the somatic cells as they may be called, furnishes the groundwork from which are built all the organs and tissues that are needed for the preservation of the life of the individual. In the smallest as in the largest, in the simplest as in the most complex, all the tissues of all the organs used in every-day life, whether the organism consists of an almost structureless body such as that of the primitive hydra, or is elaborated to the degree of perfection that is reached in man, are formed and developed from these, the somatic cells.

At the first there is no difference that we can detect between the two kinds of cells. In the primitive metazoa, and in the earliest stages of the development of those ova in which such a question can be studied, one kind of cell can

be made to replace the other, and undertake all its work. The two still possess equal powers. But as the differentiation of function advances, the divergence soon becomes complete.

THE GERM CELLS.

From this time forth the whole energy of the germ organ is devoted to the production of ova and the perpetuation of the race. It does nothing for itself. Supported and sustained by the structures formed out of the somatic cells to which it has given birth, it thrives and grows that it may transmit to the germs of the next generation all the powers it has inherited unimpaired. The race is continued without a break and generation succeeds generation; but except in the case of a few strange forms which seem to have persisted almost unchanged from time immemorial, the succeeding one is never quite the same as those that have gone before. There is always some modification introduced, however slight. No generation is exactly the same as that which preceded it. The daughter germs may appear to be exactly like the parent, but they never really are. Every germ cell before it divides or throws off a bud to form the daughter cell is modified in some way, be it ever so little. The somatic cells around it, upon which the maintenance of its life depends, themselves influenced by the ever-changing conditions around, cannot help influencing the germ cells in their turn. Always, therefore, before the germ cell is ready for division it has become in some infinitesimal degree different from the parent that gave it birth; and thus, though the continuity of the germ-plasma remains unbroken from the earliest ages to the present time, the germ cells, and through them the structures built up around them out of the somatic cells to which they give birth, little by little become modified, and transmit their modifications from generation to generation, until at last the forms produced are far different from those that first came into existence and far more complex. Countless offshoots from the parent stock have been thrown off in the course of ages in all directions. Some of these, either because the supporting structures formed by the somatic cells around them became ill-suited to the requirements of the age, or because the vitality of the germ cells failed after a time, have died away and disappeared, leaving merely fossil remains of the skeletal supporting structures to show what manner of beings they were. Many, with infinite variety of structure, ranging from the simplest blastula form to that of man, persist still. New ones even more complex may perhaps be forming at the present day. But whatever the framework formed by the somatic cells around them, the germ cells, upon which the maintenance of the race depends, are all direct descendants of the germs of the original primitive metazoa, and obey the same laws of growth and development.

THE SOMATIC CELLS.

On the other side of the picture, in contrast with these, are the somatic cells whose mission it is to form the framework for the support of the germ organ and the maintenance of the life of the individual. These at the first were in all respects the equals of the germ cells. Like these they possessed the power of producing germs and of transmitting to their descendants all the properties they had inherited or acquired. But as inevitably happens when specialisation begins, as the somatic cells become more and more perfect in their own particular line of work, their other powers began to wane. The first to disappear was the power of producing living germs that should serve for the perpetuation of the race. In the primitive metazoa all parts alike possessed this power, but at a very early period, even before the days of the fresh water hydra, it had already become restricted to one small region of the body. This was marked off from the rest as the germ organ, and henceforth the power of forming ova was confined to this alone.

The next that was lost was the power of reproducing, not the race, but the individual. In many of the lower forms of life buds which are capable of developing into individuals as perfect as their parent can develop from parts of the body composed entirely of somatic cells. This, for instance, is common among cœlenterata and even among animals so highly organised as marine worms, many of which are capable of throwing off fully developed offspring from indifferent segments of their own body. Traces of this power may be found among animals far more highly organised than these, but only in the very earliest embryonic stages of life. In adult age, when differentiation has advanced farther, reproduction of the individual from the somatic cells never takes place. With the loss of this disappears finally all power of hereditary transmission beyond the individual. The somatic cells may still reproduce their kind and transmit their qualities to other cells within the limit of the individual, never to the race.

Long after the power of complete reproduction has been lost the somatic cells are still able to reproduce parts of individual organs or portions of the body that have been destroyed or injured. Whole limbs and other appendages, for example, can be regenerated among crustacea; and though in a much lower degree, there is evidence of the power even in animals so highly organised as the lacertilia. The curious little projections that occur sometimes in the human embryo, growing on the site of limbs that have been lost early in uterine life, may quite possibly admit of a similar explanation.

The next stage, that in which the somatic cells have los the power of reproducing individuals and organs, but can still reproduce tissues similar to themselves, extends to a much later period, both in the history of the race and of the individual. Comparatively extensive losses of simple tissues may be made good during embryonic life even among vertebrata; but as age advances this power too diminishes. In the adult it can be exercised only to a very limited extent, and in the case of the most highly specialised tissues, such as nerve and muscle, it is doubtful if it can be exercised at all.

Finally, all that is left to the somatic cells, all that remains of the powers they originally possessed equally with the germ cells, is that of simple growth, the ability to maintain size and structure unimpaired in the face of constant waste. Throughout, from the beginning of all things down to the present time, whether the development of the race is considered, or its epitome, as shown in the development of the individual, the process is the same. As specialisation and differentiation advance, as the somatic cells adapt themselves to the work of forming the structures upon which the maintenance and protection of the germ depend, step by step they lose all the power of reproduction and transmission to the race they originally possessed until they retain only that of simple growth. The support of the germ organ has become the sole object of their lives. Everything else is given up that this may grow and bring forth living germs for the next generation, each of which will in its turn build up a supporting framework to serve the individual for the time being, and then be thrown away. The somatic cells themselves, and all the organs and tissues formed from them, no matter how complex nor how highly specialised they are, are sacrificed each generation and destroyed. Their purpose is achieved when once the new germs are able to build up a protecting framework of their own. They may die at once, as in the case of many insects, where the procreative act is followed immediately by death; or if it is for the benefit of the race, if they possess qualities that will be of advantage to the coming generation in the battle of life—as, for example, in the case of mammals—they may be continued a little longer, but the end is the same. The protective framework built up out of the somatic cells to serve the generation perishes with the generation; the continuity of the germ is preserved, to produce in each generation a framework for its own support, moulded, with more or less of modification, on the plan of those that have gone before.

The destiny which thus awaits the somatic framework is looked upon as quite natural where the simpler forms of life are concerned. When the next generation with its inheritance of living germ plasma is ready the parent dies. Its mission is at an end. Its work is done and it disappears. But it is equally true of the more complex forms, no matter how highly placed in the scale of organisation they may be; and it is true, not only of individuals, but of communities of individuals which have grown up and developed under the rigid and pitiless laws enforced by nature in which sentiment has no place. Nowhere perhaps is there a better illustration of this than in the case of the honey bee in which, as Tickner Edwardes has put it, the subordination not only of the individual but of the community to the conservation of the race seems to be pushed to its logical conclusion. Everything is subordinated to this one object. The lives of individuals are sacrificed wholesale under inexorable laws, if only it is for the good of the community. The aim and object of

existence is the rearing of offspring, which in their turn shall devote themselves to rearing other offspring. There is a perpetual procession in which each individual works and spends his life for some other individual, who will succeed him, and who in his turn will do the same. The individual is nothing so long as the community prospers, just as in the living body the individual somatic cells and the structures formed out of them are nothing so long as the germ can fulfil its mission.

THE ORIGIN OF THE LAWS OF DEVELOPMENT IN THE MUTUAL RELATION OF THESE CELLS.

Whether the organism is a primitive metazoon which will never attain a higher stage of organisation, or an ovum that will develop into the most highly specialised of mammals, the force that regulates and controls its development, as distinct from the power of growth which is an inherent property of its cells so long as they are living, is the mutual influence that these germ cells and somatic cells exert upon each other and upon their fellows, compelled thereto by the differentiation in their work. It is this influence, working with the driving force of inheritance through countless ages, modified in some infinitesimal degree by the surroundings in each individual case, that frames the laws that guide and control the development of the body and the tissues that compose it.

THE ORIGIN OF TUMOURS.

Tumours do not obey these laws. They are tumours because they do not. Whatever their structure, their growth and development are not conditioned in any way by the growth and development of the rest of the body. The degree of perfection to which they attain depends upon that of the tissue from which they spring, and the rate of their growth partly upon this, partly upon the supply of food they can get. Whatever their origin, no relation such as that which holds good between the germ and somatic cells ever exists between them and the parent body. They simply live upon it, like parasitic growths upon a host.

TUMOURS FROM GERM CELLS.

As there are two kinds of cells developed in the course of evolution with gradually diverging functions, so there are two kinds of tumours—one springing from the germ and the other from the somatic cells. With the former I shall not deal at any length. They may arise in various ways. Some are the product of fission of the primitive germ. In such a case if the two halves contain an equal proportion of germ cells, and if they become separate from each other in the course of growth, two equal and perfect individuals result. Others originate by a process of unequal fission or gemmation, the formation of a more or less perfectly developed bud which grows out into a structure sometimes almost as complex as the parent. Others may be caused by the detachment and displacement, perhaps by accidental violence, of a few of the germ cells, which either remain *in situ* or are buried deep among the somatic cells and then begin to develop; and others again, especially those which originate late in life, may be the result of some as yet unknown stimulation of germ cells that are lying latent in the germ organ. But whatever the mode of their origin, the essential feature of these tumours is that they are outgrowths from germ cells, and therefore possess in greater or less degree the same powers as all such outgrowths. The germ cells have been over-stimulated in some way, or over-fed, or injured, and as a consequence give birth to these irregular structures instead of, or in addition to, the natural ones. The difference between them is one of degree, not of kind.

Like the normal structures that are produced from germ cells these abnormal ones form their own somatic framework, though, as might be expected, this differs widely in the degree of its perfection. At one end of the scale there may be a complete and separate individual, in all respects as perfect as the parent one, capable of maintaining itself and of perpetuating the race. At the other end, because the germ cells are either few in number or have lost much of their germinal power, there may be merely an irregular mass, a dermoid, built up out of the wanton over-production of epiblastic cells. In either case the different cells that compose these structures bear to each other within the limits of that structure the same relation (so far as their development will allow them) as that which exists between the different cells of the parent body. But no such relation ever exists between them and those of the parent. Except that they draw their food-supply from it and give up their waste products to it, the cells of the tumour own no connexion of any kind with those of the stock from which it grew. They neither influence it, nor is it influenced by them. Their relation to it is that of an independent organism, developed independently from the germ cells deriving its nourishment from the parent in the same way that a parasite or a foreign growth might, or in a few exceptional cases absolutely and entirely separate.

TUMOURS FROM SOMATIC CELLS.

Putting upon one side these, which are comparatively rare, all the rest, forming the vast majority of what are commonly called tumours, originate by a process of budding from the somatic cells after their differentiation from the germ cells has taken place, or from structures developed from them. These tumours owe their origin, not to the action of germ cells, but to the release from control of what is left of the power of reproduction which the somatic cells originally possessed in equal degree with the germ cells, but which was suppressed as these cells became specialised for the support and maintenance of the germ organ.

A few of these tumours make their appearance very early in life, at a time when specialisation is not yet far advanced and the powers the somatic cells originally possessed are but slightly impaired. They grow out as buds, which in some instances attain such a high degree of complexity that they will stand comparison with those I have already mentioned as originating from detached portions of the germ organ. Indeed, it is not always possible to say that this is not their real origin, and that their apparent descent from somatic elements is not actually due to their having originated from detached portions of the germ organ that have been accidentally displaced and buried among somatic structures. A few others take the shape of organs, or parts of organs, growing out as buds from the extremities or other portions of the body that develop comparatively late. Theoretically, these should be capable of being distinguished by the date of their appearance, but the early stages of the development of the mammalian ovum are so much compressed, and represent in the course of a few hours such an infinity of ages spent in the evolution of the race, that it is not possible to draw distinctions of this kind.

All these tumours, however, are comparatively rare. The total number is very small in comparison with that of what may be called ordinary growths. They nearly all originate early in life, though they may not always make their first appearance then, and they stand apart in a class by themselves. By far the greater number of the tumours that are developed from the somatic structures grow out as buds much later than this, long after the early stages of life have been passed and the differentiation of the tissues completed, and become more and more common as age advances. These rarely consist of anything more complex than simple tissues. The cells from which the buds originate have already reached such a high degree of specialisation that they have lost the power of forming everything except tissues somewhat like themselves; more elaborate reproduction is no longer possible. If the parent cells have already reached their final adult stage the increase in size of the budding tumour is very slow. If, on the other hand, they are still immature and capable of rapid multiplication like those, for instance, that are present, often in considerable numbers, both in epithelial and mesoblastic structures, for the purpose of replacing the losses caused by the wear and tear of every-day life or the destructive action of persistent irritation, growth may be very rapid. In the one case the resulting tumour is built up of tissues that have practically attained their full development; its increase in size is slow, and it never invades the rest of the body. In the other it consists of cells which retain so much of their primitive energy of growth, that, if once released from the restraint of the laws that would compel their further development, they grow and multiply in a manner only surpassed by the cells that compose the germ layers of the embryo. They increase without limit and without an attempt at higher differentiation, and they spread everywhere in the directions of least resistance, partly of their own efforts, by a process of autotransplantation, partly carried along in the blood stream, or in the lymphatic channels, and unless destroyed as foreign bodies by the tissues among which they lie, they reproduce their kind wherever they come to rest.

THE PRINCIPLE UNDERLYING THE GROWTH OF SOMATIC TUMOURS.

Whatever form is assumed by the tumours that originate from the somatic elements or the structures derived from them, the underlying principle of their growth is the same. The power that would compel the higher differentiation of the cells that compose them ceases to act. The cells that form the tumour-bud cease to develop further, and never do any work. They cease to bear any relation to the rest of the body, except that they draw their food-supply from it and give up their waste products to it. They do not influence other tissues in any way, nor are they influenced by them. They continue to grow and multiply, perhaps with all the greater energy, because the force that would have been consumed in raising the cells to a higher plane of differentiation is available now for growth. The tumour cells go their own way, never rise to a higher plane, never do anything for the rest of the body, but, like parasites, devote the whole of their energy, which should work for the common good, to their own increase in size and number. What remains to them of their primitive reproductive power is released from all control and guidance.

How is it that the tissues at one small spot in the body are suddenly able to assert themselves in this way? How is it that almost from one minute to another they can shake off all allegiance to the other tissues, and except that they are dependent upon the rest of the body for their food, grow upon it, entirely independently of its growth, and thrive while it may starve? How is it that from normal tissues, doing their normal work, they can suddenly develop into structures like parasites that drain the body of its sustenance and do nothing for it in return?

THE CONTROLLING POWER OF HEREDITARY TRANSMISSION.

There is only one answer to questions such as these. The progressive development of the organs and tissues of the individual, as of the race, is the outcome of the mutual relations that have been built up in the course of ages between the infinite variety of cells of which the body is composed, transmitted from generation to generation. Environment and the actual working of the organs and tissues in the individual are but forces of the moment. The real controlling power is the hereditary transmission of the relations which the different parts of the body have exerted upon each other through immeasurable time, and which have been handed down in ever increasing number from countless ages. It is this that directs development and differentiation and keeps growth in check. If it fails from any cause, or if it is overpowered by the forces of the moment, whether they form part of the environment or originate in the body itself, development and differentiation come to an end; organs fail to attain their normal perfection, and tissues remain at that level of specialisation at which they happen to be at the moment, incapable of work because of their imperfect development, but with their power of growth not only intact, but released from all restraining influence, and, it may be, even increased in vigour.

To put it very crudely, the tissues have become what they are in virtue of the accumulated effect of all that they have done for the rest of the body and that the rest of the body has done for them through countless ages. Their differentiation is the outcome of the work of their predecessors. Each cell as it comes into being has its destiny marked out for it, by virtue of the relations it bears to the rest. It is bound by the force of heredity to develop in one direction, and to reach a certain stage of perfection, that it may be able to carry on its work. But sometimes, just as the development of an organ is arrested without its power of growth being impaired, so the differentiation of a budding tissue may be arrested and its power of growth be left unimpaired. Somewhere, in some part of the body the force that should compel the evolution of the reserve cells or of those young cells that are constantly being formed to take the place of those worn out, suddenly ceases to act. All progress comes to an end. It may be at an early stage while the young cells still retain all their embryonic vigour, or it may be late, when they have all but reached their final form. In either case growth continues unimpaired, because growth, and its consequence, increase in number, which is the outcome of continued growth, are in no way dependent upon these relations. The work the tissues have done in the past has no influence over their power of growth except through the differentiation it induces. Growth, ceaseless, continuous growth, is a property inherent in living structures so long as they are living—a property which is controlled and moulded by advancing differentiation, but which, if differentiation is checked, especially in its earlier stages, is capable of reasserting itself with all its old energy, or even with increased energy, as the force which would have been consumed in carrying specialisation to a higher plane is now available for growth alone. The result is a tumour, an irregular, formless mass of badly differentiated tissue, which grows independently and continuously, which does not acknowledge any obligation or do any work, and is so much a foreign element among the tissues in which it lies that its presence is resented and resisted by them in proportion to the activity with which its size increases.

If the power of hereditary transmission continues unimpaired throughout life the development of the tissues is perfect and remains perfect; their work is properly carried out, and all the complex relations existing between them are maintained intact. If, on the other hand, it fails, as it may fail in advancing age from mere lapse of time, or when owing to the long persistence of some local irritation there is a very rapid production of myriads of young cells, the evolution of the tissues stops, it may be early in their life-history, or it may be late; growth continues, and the product becomes a tumour which continues to increase in size with a rapidity that depends upon the degree of differentiation already attained by the cells from which the bud first grew and the supply of food that they can get.

It may be the fault of the tissues at that particular spot, and the origin of the tumour be purely local, as in the case of growths caused by X rays or by soot, agents which seem to be capable of making such tumours as papillomata and epitheliomata grow from the epidermis in any part of the body, in any person; or it may be in some measure the fault of some other structure perhaps far distant, with which the tissue from which the tumour springs stands in some working relation, and only the locality be determined by the local agent. In either case the essential feature is the cessation of the progress of differentiation and the removal of all restraint upon growth. Something, some one of the forces of the moment, has disturbed the relations that have been evolved in the course of ages between these particular cells and the rest of the body. The differentiation of the tissues, which these relations have built up step by step through countless generations, comes to an end; growth continues and a tumour is formed.

TUMOURS DUE TO INVOLUTION CHANGES.

Nor does this explanation hold good for those tumours only that spring from the somatic cells and are formed of more or less highly differentiated simple tissues. It is no less true of those strange growths that sometimes develop from fœtal or embryonic relics, such as the post-anal gut, the thyroglossal canal, and many others. The hereditary transmission of the relations that have grown up between the various tissues of the body and of the structural features that have been produced by them implies not only the progressive advance of those tissues that are of use, but no less also the recession and disappearance of those that have ceased to be of use. Evolution stops when the power of hereditary transmission fails; but so also does involution. Fragments of organs that should disappear and be absorbed, persist, and continuing to grow and to work after a fashion, become the nucleus of what are sometimes colossal tumours.

THE INHERITANCE OF TUMOURS.

In this way, moreover, and in this way only, is it possible to account for the apparent inheritance of tumours. Tumours, like other acquired features, are not inherited, yet there can be no question that certain families are much more prone to the formation of tumours, and of particular kinds of tumours, than others. It is well known how the power of hereditary transmission varies in strength in different families. Some special features are handed down unchanged from one generation to another, while others can scarcely be traced. The same thing is true of the tissues that build up those features. In some the hereditary power is so strong that they maintain throughout life the full perfection of their development, and growth is never allowed undue licence. In others the power is weaker and fails to a greater or less degree. Then if by any chance that part is exposed for a

sufficient time to the action of one of the forces of the moment, so that, for example, it is necessary that the tissues should be replaced with great rapidity, the evolution of the young growing tissue stops because the driving power has failed, and growth, freed from its control, asserts itself with all its energy. It is not the tumours that are inherited, but the strength of the driving force that directs development and controls growth. This, in the case of some particular tissue, may fail in several members of the same family for generation after generation, just as may the transmission of some special feature.

THE SIMULTANEOUS GROWTH OF TUMOURS.

This, too, explains the well-known liability of homologous tissues to become almost at the same time the seat of similar tumour-growths. Such an occurrence is most common in connexion with non-malignant tumours, such as fibromata and lipomata, but it is not confined to these. I have known, for instance, duct-carcinoma develop at the base of the nipple in both mammary glands within three months. The strength of the power which has guided the differentiation of the tissues through immeasurable time and which controls their inborn capacity for limitless growth is naturally the same in tissues of similar descent. It maintains its control, or it fails before the action of the forces of the moment in the same way in them all.

As it is the work of the tissues, their own and that of past ages, that step by step has made them what they are, it has been suggested that it is something connected with their work that cuts their evolution short, and allows their power of growth to assert itself unchecked, and that the origin of tumour buds is to be found in a functional disorder of some kind. But while it is quite true the tissues that compose tumours never do any work, the failure to work is the consequence, and not the cause, of the arrest of evolution. Tumour tissues are imperfect, and remain imperfect, and work cannot be expected of such. Their differentiation has been arrested before they were capable of work. Tumour tissues never work because, with the rarest possible exceptions, they never reach the perfection of maturity. The exception proves the rule; a few mammary adenomata attain such a high degree of perfection that secretion has been known to take place in certain portions of them. The vast majority falls far short of this.

THE ARREST OF DEVELOPMENT OF ORGANS.

If it is asked what could interfere with the power of hereditary transmission to such an extent as to cause the arrest of the differentiation of the tissues in one part of the body and the formation of one kind of tumour, or the arrest of their involution in another and the formation of another kind, I can only point to the analogy of the arrest of development of organs and say that I can see no reason why such a power may not fail from mere exhaustion, as, for instance, in old age, either of organs or of individuals, when it is notorious that the liability to tumour-growth becomes greater and greater, or from excessive action, as when an enormous number of young cells is produced with great rapidity in response to some persistent chronic irritation. Whether the action, or want of action, of any organ in the body could have a similar influence over the power of hereditary transmission and bring its work to a sudden stop it is impossible to say. There is one structure in the body at least that appears to be capable of abrogating the laws that control the growth of tissues and of enabling them to increase in size without limit; but we know too little of these things as yet. The study of physiology is of yesterday. At our best we have only a very general acquaintance with some of the most conspicuous individual actions of what may be called the gross mechanical apparatus of the body. We know next to nothing of the essential organs of life, those that really matter where growth and development are concerned. We are only just beginning to grasp the fact that many absolutely insignificant-looking structures, some of them almost microscopic in size, possess the most extraordinary power over growth and even over life itself; and we are only just beginning to realise that no organ or tissue in the body exists for itself alone, but only in relation with every other organ and tissue. It may be that when we know more about these things some structure will be found which has some control over hereditary transmission and the development of tissues as distinguished from their growth. Until then, and it must be admitted the prospect is not a good one, all our hopes of finding such a thing as a cure for the growth of tumours (for amputation, though it may free the patient from the consequences, can in no sense be regarded as a cure) must rest either upon finding some remedy which, like Coley's fluid, can directly kill the tumour cells without endangering too greatly the vitality of the normal tissues; or upon stimulating to increased energy the normal tissues that surround the tumour, until they are able to treat those degenerate cells that have failed to attain their full development, and have continued to grow at the expense of the organism without being of any service to it, in the same way that the workers treat the drones.

SOME CASES OF PYREXIA.[1]

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THE object of my paper is partly to make use of the plentiful clinical material which comes in my way as pathologist to the Royal Devon and Exeter Hospital, and partly to show, what no doubt is known, that it is only by a truly judicial consideration of the evidence obtained by the methods of pathology and bacteriology, as well as by those of clinical medicine and surgery, that we can hope to arrive at a satisfactory diagnosis. If a biased view is taken of these cases, whether from the pathological or clinical side, mistakes are pretty certain to arise.

I am going to report some cases illustrating many different conditions causing pyrexia. Pyrexia due to enteric and paratyphoid fever, to the pneumococcus and to syphilis; pyæmic and septicæmic cases, including malignant endocarditis; pyrexia due to subdiaphragmatic abscess, portal pyæmia, and to nematoid worms; urinary cases and rat-bite fever.

I will begin by making a few remarks as to the Widal reaction. It is rarely found before the fifth day—generally about the eighth. In very severe cases it may not appear at all, and occasionally even in ordinary cases not till late. If the patient has had enteric fever previously, or has been inoculated with typhoid vaccine, or is a typhoid carrier, a positive result may be obtained, but under these circumstances the proper thing to do is to repeat the test a few days later, and note whether agglutination occurs in higher dilutions than when first done, so that for this purpose it is necessary on each occasion to find the end limit of the agglutination of the serum.

There is also paratyphoid fever to be considered. Professor F. A. Bainbridge in the Milroy lectures thoroughly reviewed the relations of paratyphoid fever A and B to meat poisoning. Paratyphoid fever A is due to bacillus paratyphosus A, an organism of the Salmonella group, and closely allied to bacillus paratyphosus B, to Gaertner bacillus (the cause of food poisoning), to B. suipestifer (found in swine fever), and to the Danysz bacillus so extensively used for destroying rats and mice. These organisms are so closely allied that they cannot well be separated culturally, but this can easily be accomplished by agglutination tests and by the test of complement deviation. The diseases are quite distinct, the food poisoning cases having an acute course with gastro-intestinal irritation, and with an incubation of a few hours, and the paratyphoid fever A and B having an incubation period of 8 to 15 days, and being very like mild attacks of enteric fever.

Paratyphoid fever A is found chiefly in India. Perforation rarely occurs, and the mortality is only 2 per cent., that of enteric fever being about 13 per cent. Sometimes besides the rose spots a purpuric eruption is seen. Headache and a rapid pulse are prominent features, the spleen is enlarged, but Peyer's patches are not obviously involved. Paratyphoid fever B is practically the same, only purpuric eruptions do not occur. Inflammation of gall-bladder and periosteal abscesses have been met with. Severe headache is a frequent and prominent symptom. Pyrexia lasts from 4 to 30 days, average 17; as a rule it is indistinguishable

[1] A paper read before the Devon and Exeter Medico-Chirurgical Society.

from enteric fever. Occasionally the onset is more acute, and ushered in by rigors and vomiting. Labial herpes occurs, and the spleen is supposed to be firmer than in enteric fever. Post mortem there is no inflammation or ulceration of Peyer's patches as a rule. The large intestine is intensely inflamed and shows small ulcers. Mortality 3 per cent. This form is found in Great Britain and on the continent.

Both paratyphoid bacilli are confined to the intestines of human beings, who either have paratyphoid fever or are acute or chronic carriers, either urinary or intestinal. Women are more frequently carriers than men owing to their tendency to intestinal stasis and gall-stones. The agglutination reactions require careful consideration. Group reactions may occur—namely, the serum of a patient suffering from a disease due to a particular organism may agglutinate an allied organism. Cases have occurred where a patient's serum has agglutinated bacillus paratyphosus B in higher dilutions than bacillus typhosus, and yet the latter only has been cultivated from the blood. Hence it is necessary in such cases both to find the end point of the agglutination, which may be as high as 1 in 20,000, and also to carry out absorption tests. By adding to the serum living bacilli of, say, bacillus typhosus and centrifuging all agglutinins of this organism are removed, and if the case is one of enteric fever no agglutinin remains. The co-agglutinins only would be removed in such a case by bacillus paratyphosus B or A. The reverse proceeding to such agglutination tests may be carried out, using known sera and the unknown organism obtained from the patient.

Blood cultures are almost invariably successful in the first week. It is necessary to draw off 5 to 10 c.c. blood, and it is best to inoculate a flask containing 100 c.c. broth with 1 per cent. citrate of soda in it to prevent the blood from clotting. At the height of the fever or later, or in the case of a carrier, the organism may be isolated from the stools by such means as the Conradi-Drigalski plates, but then full cultural tests must be applied. A freshly isolated organism may not be agglutinated by the patient's serum, though it may be by a stock antiserum to the same organism.

A man, aged from 30 to 40, eight years ago had enteric fever in Australia; since then he has periodically had attacks of pyrexia, lasting for from 14 days to three weeks. There have also been at the same time pain in the region of the gall-bladder with tenderness, but no definite enlargement. He has been treated by a paratyphoid vaccine without any apparent benefit. Whether this vaccine was made from his own organism or was a stock one I cannot say. Agglutination test: There was complete agglutination to bacillus typhosus in dilutions of 1 in 10 and 1 in 50, partial in 1 in 100, while bacillus paratyphosus A gave complete agglutination in 1 in 10, 1 in 50, 1 in 100, 1 in 200, and 1 in 400. Partial in 1 in 600. Blood culture was negative.

Since I saw him he has been operated on by Mr. Mayo Robson and the gall-bladder drained; he has been quite well since. I believe culture from the gall-bladder proved negative, but pancreatitis was present. The question whether this patient was a paratyphoid carrier must remain unsettled.

The presence of a leucopenia is a valuable confirmatory test of enteric fever. Mr. G. L. Thornton, of Exmouth, I believe has great faith in the diazo reaction. The following are two anomalous cases of enteric fever:—

1. A woman was admitted, under the care of Dr. H. Davy, on Sept. 23th, 1906, and discharged on Dec. 27th. She was admitted for muscular rheumatism. The attack came on suddenly. No joints were affected. Vomiting and indigestion were complained of. Pyrexia was present, 104° to 102° F. Pulse 120; respiration 32. Abdominal pain and tenderness and diarrhœa ensued and the urine contained traces of albumin. Blood count—white cells 6800. Widal positive. The spleen became palpable and spots were observed. The temperature was irregular and not characteristic.

2. A woman was admitted, under the care of Dr. Davy, on Oct. 23th, 1906. She died on the 29th. There was a history of cough for some weeks, with difficulty of breathing. The urine contained albumin and uræmia was diagnosed outside. A severe rigor occurred and dyspnœa was marked. Diarrhœa, epistaxis, and hæmoptysis ensued, and spots were found. The urine contained albumin and casts. Widal positive.

Necropsy.—There was ulceration of the tongue, the heart was flabby, and the spleen was enlarged. Marked nephritis was present and typical typhoid ulcers. A bacillus was isolated from the spleen, having the cultural and agglutinating characters of bacillus typhosus. Here was a case where the toxin of bacillus typhosus acted chiefly on the kidneys, causing "nephrotyphus."

Infection due to Bacillus Coli.

From cases of enteric fever it is a short step to cases of infection due to the bacillus coli communis. Many cases of pyrexia often resembling enteric fever, or possibly tuberculosis, general or urinary, are due to urinary infection by this organism. They generally start acutely, and either undergo a cure or become chronic. There is often a history of a chill, and in most cases there is not only very marked bacilluria, but also definite pyuria. There is often pain and aching of one or both kidneys, with dysuria and frequent micturition.

Evidently a pyelocystitis occurs, and sometimes a nephritis as well, with occasionally the production of multiple abscesses. In some cases there is a bacilluria with very little pus present. There may be as well as kidney symptoms definite abdominal trouble with pain and meteorism. The bacillus coli is able to produce a massive peritonitis, having very much the same features as that caused by the tubercle bacillus or actinomyces. In one of these cases there was, besides the bladder symptoms, a parametritis or pelvic peritonitis. They undergo a natural cure, or may require vaccine treatment, which, though it may not in every case absolutely eliminate the bacillus from the urine, causes, I believe, nearly always, very great benefit.

A woman was admitted, under the care of Mr. A. C. Roper, on Oct. 13th, 1911, and died on Dec. 25th. There was a history of pain in the left hypochondrium for four weeks with vomiting after food. There was a well-defined, very tender mass in the left hypochondriac region. Leucocytosis 23,000. An exploratory incision was made and multiple renal abscesses found. Bacillus coli communis was isolated from pus. Marked pyrexia was present.

A woman, aged 28, was admitted, under the care of Dr. Davy, on Feb. 15th, and was discharged on Oct. 11th last. There was a definite remittent temperature at first, but latterly this ceased. History: Well up to Christmas. Illness started with a cold. She shivered and suffered from diarrhœa and vomiting, with headache and pain on micturition. Definite parametritis was present. Uterus fixed in anteverted position. Pus was found in urine, and bacillus coli communis isolated. Treated by autogenous vaccine, and when last seen a fortnight ago was quite well, with no pus or organisms in the urine.

A girl, aged 3, was admitted under the care of Dr. W. Gordon. She was in hospital one month, and was discharged cured. It was noticed that the child passed urine very frequently, and on admission she looked very ill and feverish. Temperature 102° F., pulse 140, and respirations 32. Von Pirquet negative. Urine contained no tubercle bacilli. Bacillus coli communis obtained culturally from the urine, which contained many pus cells. Under treatment by urotropine the child made a complete recovery.

Children are not immune to this condition. Female children are supposed to be more liable to infection, as there is more possibility of direct infection upwards per urethram.

A woman was admitted, under the care of Dr. Gordon, on Jan. 25th, 1912. She is still under treatment. Eight months before admission she had a chill after sitting out on a damp evening. Symptoms: Frequency of micturition and pain. Liver enlarged, spleen palpable, left kidney very moveable. Temperature elevated and tongue coated, and there was definite loss of flesh. Bacillus coli communis isolated from urine. Autogenous (unheated) vaccine was given with very great improvement.

Here there was a definitely moveable kidney, and no doubt a twist of the ureter in such cases may cause, besides pain, attacks of pyrexia. Another patient under my care, whose attack began with a chill, and who at first was extremely ill with pyrexia, resembling enteric fever, also had a moveable kidney and obtained marked benefit from the wearing of a belt.

I will now relate a urinary case under my care where the symptoms at first were so severe that pyæmia, septicæmia, or malignant endocarditis was suspected, but in the end a perineal abscess developed, and when this was opened a rapid cure ensued. Here we were inclined to be too pathological, if that is possible.

The patient was a middle-aged man. Illness began a week before I saw him, with some pain on micturition. About a month before this he was exposed to a very bad smell when undertaking the burial of a woman who had died from cancer of the womb. Symptoms: Marked irregular pyrexia, and recurring rigors lasting about 20 minutes, and generally followed by vomiting. No trouble in lungs or heart. Widal negative. Blood count 13,000 whites, with 93 per cent. polymorphs. Blood culture negative. Spleen slightly enlarged. Treated by antistreptococcic serum and streptococcic vaccine, without any benefit. A week later he complained of pain on micturition, and a perineal abscess developed, and was opened. The temperature fell and the patient soon recovered.

I believe Mr. Russell Coombe has since had a somewhat similar case, where the urinary trouble was an extravasation and where very marked pyrexia was present. My only connexion with this case was that I was asked to examine some urethral pus for organisms.

Pyæmic and Septicæmic Cases.

A man, aged 38, was admitted, under the care of Dr. Davy, on March 6th and died on March 10th, 1912. I also saw him outside with Dr. J. D. Harmer. He was well up to the week before admission, when he began to complain of pain all over the body, but especially over both lower limbs. The left wrist was swollen. A Widal was done three times with negative results. The abdomen was much distended owing to paralysis of the bladder, which was frequently very full. There were

marked pyrexia and delirium; the tongue was dry; everything was passed into the bed, and there were general twitchings of the body and slight rigors. Membranous tonsillitis occurred. White cells 28,000, with 89 per cent. polymorphs. Urine contained many red blood cells, some leucocytes and staphylococci. On blood culture staphylococcus aureus was obtained. An abscess developed in the gluteal region. No post-mortem examination was allowed.

Here first enteric fever was suspected, but the leucocytosis and negative Widal put this out of court, and blood culture and presence of staphylococci in the urine clinched the diagnosis. Whether the primary cause of the pyæmia was a tonsillitis or some deep-seated osteomyelitis cannot be known.

A man, aged 56, was admitted, under the care of Mr. Roper, on June 25th and died on August 14th, 1908. Seven weeks before admission he noticed pain in the calf of the left leg after hard work. There were cicatrices in the leg due to osteomyelitis with removal of bone 40 years previously. An abscess developed in the calf, which was opened. The temperature was raised and irregular in type, 103° to 105° F. He became delirious and vomited, and jaundice appeared with abdominal distension. On blood culture staphylococcus aureus was obtained.

Necropsy.—Liver was much enlarged and congested. Small foci of pus in portal spaces all over the liver.

A man was admitted, under the care of Dr. Davy, on March 29th and died on April 10th, 1910. At the end of January last he noticed a pain in the right side in the region of the lower ribs; he took to his bed and remained there three weeks, and then returned to work, but in another three weeks he had again to go to bed owing to pain and difficulty of breathing. Diarrhœa was present. He looked very ill and thin on admission, and his pulse was 104 and temperature 102·8° F. The liver was displaced downwards and the spleen was enlarged. There was partial dulness at both bases with fine crepitations and bronchial breathing. Rigidity in the epigastrium. On April 6th a rigor occurred (temperature went up to 106°), followed by profuse sweating. Later very definite dulness on the right side posteriorly suggested pus, and on resection of a rib much foul-smelling matter was evacuated.

Necropsy.—The liver was riddled with abscesses of various sizes. The drainage-tube was in one of them. The appendix was gangrenous.

Though there never had been anything pointing to appendicitis, this was the origin of the trouble, resulting in suppurative pylephlebitis and death.

Septicæmia is not always fatal, as is shown by the case of a girl, under the care of Dr. Gordon in 1906, who had irregular temperature, with rigors, lasting on and off for over two months, and who developed in succession thrombosis of veins of the thigh, legs, and arms. She became very anæmic and suffered from palpitation and severe pains in the chest and around the spleen. In due course she made a complete recovery. Treatment was antistreptococcic serum and drop doses of cyllin.

A woman was admitted, under the care of Mr. J. D. Harris, on Oct. 6th and died on Oct. 15th, 1905. On the day before admission she had a slight accident, tumbling up stairs. This was followed by a pain in the left side. She did not sleep that night on account of pain. Pyrexia was present. Widal negative. The abdomen became markedly swollen and tympanitic and tender. Diarrhœa began on the second day after admission and was of pea-soup character. Vomiting was severe. Leucocyte count on Oct. 12th 40,500, 87 per cent. polymorphs. On Oct. 13th it was again 40,000. There was a history of long-standing indigestion with occasional attacks of abdominal pain. Dulness was present at both bases, with a friction sound on the right side. Impulse of the heart was displaced inwards and upwards. A needle introduced drew off foul-smelling pus, a rib was excised and a pint of pus evacuated. Death occurred next day.

Necropsy.—Hour-glass stomach, with a perforated ulcer communicating with a sub-diaphragmatic abscess. Pus also was present in the hollow of the pelvis around the uterus and appendages.

I have treated by vaccines in all 4 cases of malignant endocarditis, obtaining by blood culture a streptococcus—in every case, I regret to say, unsuccessfully. So far I only know of two cases of this disease which have been cured by vaccine treatment, and in neither of these could the fact of endocarditis be definitely proved. One was the case under Sir James Barr, where Captain S. R. Douglas set up a laboratory upon the premises and did the opsonic index twice daily. Here the organism was a streptococcus. The other was a case under Dr. J. Michell Clarke, where the influenza bacillus was obtained by culture. In both of these cases, instead of an actual endocarditis being present, there was the possibility of the bruit being due to relative mitral insufficiency.

The cardinal signs of malignant endocardits are: signs of valvular lesion with changes in character of bruits, presence of organisms in the blood, occurrence of embolism in various organs, with symptoms of intoxication—namely, pyrexia, headache, malaise, and rigors.

A girl aged 19. There was a history of having had influenza over two months before I saw her. She had been in bed ever since, with elevated temperature, malaise, and loss of appetite. She had coloboma iridis and congenital heart disease, probable congenital stenosis of the pulmonary orifice, with perforation of the ventricular or auricular septum, as there was a harsh rasping murmur over the mid-sternum, also heard all over the præcordium. She suffered from pyrexia, from hæmaturia, and albuminuria, dry pleurisy with marked dyspnœa and pain, and was greatly emaciated. Besides being treated by vaccines she had per rectum antistreptococcic serum, which caused no benefit, but resulted in a severe attack of urticaria and rheumatic pains in joints. A petechial rash appeared and ulceration and perforation of the septum nasi, evidently due to an embolus. Finally, a severe attack of parotitis developed, and she died about six months after the onset of illness. Blood cultures showed a plentiful growth of a streptococcus of the salivarius type.

A girl was admitted, under the care of Dr. Davy, on Feb. 9th and died on March 24th, 1905. There was a history of congenital heart trouble with cyanosis on exertion or exposure to cold. She was ill for three weeks before admission with headache, fever, and loss of flesh. There was a loud, harsh systolic bruit, heard best over the pulmonary orifice. There were marked cyanosis and dyspnœa. White cell count 27,000.

Necropsy.—A small cavity in the left lung. Infarctions in lungs and spleen. The main branch of the pulmonary artery was plugged with ante-mortem clot. The right ventricle was dilated and there was a congenital interventricular opening, some endocarditis of the tricuspid valves, but the valves of the pulmonary artery were replaced by a mass of vegetations, which were composed mainly of micrococci.

Malignant endocarditis is very likely to be developed in cases of congenital heart disease. In some cases this disease lasts for many months, and may show marked remissions. In others the course is extremely rapid. I saw with Dr. Davy a very acute case where there was plugging of the femoral artery, and gangrene ensued. Coma and death soon took place. Here the mitral valves were involved. Pyrexia with a change in the character of bruits in heart disease does not always mean malignant endocarditis, as is shown in the case of a man under the care of Mr. H. Andrew, who developed rapidly a marked aortic bruit with pyrexia. Blood culture proved negative, and he recovered.

Cases of Pneumococcic Peritonitis.

A woman, aged 35, was admitted, under the care of Mr. C. E. W. Bell, on Feb. 11th last and died the next day. She was seen by Dr. G. P. D. Hawker outside. She was taken ill with pain in the right shoulder and chest, with rigors and fever. She got up next day, though no better, and then began to have pain in the abdomen. Next day she took purgatives and loose stools resulted. The following day abdominal distension was noted, but the patient would not come in. On admission her temperature was 101° F., pulse 110, and respirations 28. There was a flushed appearance suggesting pneumonia, and much distension of the abdomen, especially in the lower part. A tympanitic note was found over the abdomen, except in the right flank, where it was dull. There was slight dulness at the right base posteriorly, with a few crepitations. Exploratory laparotomy was performed. The intestines were found to be covered with thick fibrinous lymph. Films and cultures proved the pneumococcus to be the cause.

A man, aged 56, was admitted, under the care of Mr. A. C. Roper, on May 19th, 1910, and died the same day. He was at work till the evening of the day before admission. About 5 P.M. he began to complain of pain across the abdomen. During the night this increased. He says that previously he had been quite well and able to do his work. On admission the temperature was normal in the mouth and 99° in the axilla. Respirations 44. The pulse was quick and weak. There was marked meteorism. The flanks showed shifting dulness. Bronchial breathing at the left base, with moist crepitations.

Necropsy.—The abdomen was full of stinking pus, but there was no perforation. The lower lobe of the right lung showed red hepatisation, and films demonstrated capsulated diplococci, evidently pneumococci.

A woman was admitted in a collapsed state, under the care of Dr. Gordon, on March 10th, 1906, and died the same day. She had been ill for three days before admission. The onset was marked by sudden abdominal pain and dyspnœa, with diarrhœa and vomiting. The abdomen was much distended, especially in the region of the appendix.

Necropsy.—Creamy pus was present in the peritoneal cavity, with adherent lymph. There was no perforation of the stomach, duodenum, or intestines. No appendicitis or cholecystitis or perforation of gall-bladder. No pyosalpinx or pancreatitis. Films and cultures from pus showed pneumococci.

Attacks of bronchitis with pyrexia are often caused by the pneumococcus, and here I may mention in parenthesis that marked benefit is obtained by vaccine treatment. I recently made a pneumococcic vaccine for Dr. J. H. Iles for a man with chronic bronchitis and pyrexia, due, I believe, to pneumococcic infection, with, I am told, a good result.

Pyrexia due to Various Causes.

Cases of lymphadenoma occasionally exhibit marked pyrexia, as in a boy under the care of Dr. Gordon, who periodically got attacks of fever lasting a week, and at the same time the glands of his neck became much swollen. A peculiar organism was obtained from his blood, but a vaccine did no apparent good, and it was impossible to definitely connect this bacillus with the condition. Lymphadenoma, like pernicious anæmia, splenic anæmia, and probably leukæmia, especially acute lymphatic leukæmia, are due no doubt to a toxin, and consequently pyrexia occurs. This may also be found in cases of anæmia due to pyorrhœa alveolaris, which should not be forgotten.

Pyrexia of a remittent or intermittent type, which may be mistaken for typhoid fever, tuberculosis, or malaria, occurs in the course of syphilis. I have seen two cases of this. One was that of a man under the care of Mr. Roper, who was admitted with swelling of the knee-joint. Pyrexia occurred

and a Widal proved negative. Wassermann reaction, however, was positive, and with mercury the temperature rapidly fell and the joint trouble cleared up.

The other case was that of a boy, admitted under the care of Dr. Gordon, with congenital syphilis and choroiditis, who always gives a very marked positive Wassermann. He was admitted in a semi-conscious state with cerebral symptoms. These cleared up, and he was discharged, but later was readmitted with a temperature of 102° F. and swollen glands of the neck.

I have had three cases of trichinosis. The first one Mr. J. D. Harris and I published in THE LANCET, and a reprint of which is here for anybody who wants it. This patient had swelling of the eyelids, with tenderness of muscles, headache, and pyrexia. A history was obtained of his having partaken of diseased pork. A woman who also ate this pork was ill. Both these patients had marked eosinophilia, and the trichinæ were demonstrated in the pork, and also in a dead rat found on the farm. I have lately examined the blood of another patient, under the care of Dr. C. J. Vlieland, who in all probability had trichinosis. Her blood showed 33 per cent. eosinophiles. Evidently trichinosis is much commoner than is generally supposed.

Pyrexia may be due to round worms as well as to trichinæ. Osler calls the condition typholumbricosis. The following case is possibly such a one :—

The patient was admitted, under the care of Mr. Harris, on Nov. 11th, 1911, and was discharged on Jan. 11th, 1912. She was supposed to be suffering from appendical abscess. Laparotomy was performed and the appendix was found to be normal. The patient was in the fourth month of pregnancy. She developed jaundice, high temperature, and rapid pulse and respiration. Leucocytosis 47,000. Widal negative. Examination of lungs negative. On Dec. 11th acute parotitis developed on the left side. This subsided only to be followed by a similar condition of the opposite side, which also subsided. On the 28th another rise of temperature corresponded with the passing of a round worm 10 inches long, the temperature dropped, and the patient was later discharged on account of her pregnancy.

I have seen one case of rat-bite fever where there were periodic attacks of pyrexia, with pains in the limbs of a rheumatic character, and an urticarial eruption.

Toxæmia and uræmia may cause pyrexia, as is shown in the following case :—

A woman, aged 40, was admitted, under the care of Dr. Davy, in 1906. She had been ill for six months and suffered from severe abdominal pain with vomiting. There had been diarrhœa for the last 14 days, with much thirst, giddiness, fainting, and headache. She was passing very little urine, only three to four ounces ; the face was puffed and the abdomen swollen ; slight jaundice was present. The urine contained albumin and bile. Leucocytosis 22,000. She became very drowsy, with twitching of hands and unequal pupils. Diacetic acid and B-oxybutyric acid were found in the urine. Absolute coma ensued, with a temperature of 103° to 104° F. Mr. Roper transfused her with a quart of 2 per cent. sodium bicarbonate, and she rapidly recovered. Treatment besides transfusion consisted of hypodermics of strychnia and pilocarpine and vapour baths.

In conclusion, I must thank you for your attention to my somewhat lengthy paper, but I trust that the cases I have related to you may have shown how many difficulties there are in arriving at a diagnosis in a case of pyrexia, and may be of some help to you in solving such difficulties in the future. I should also like to thank the physicians and surgeons of the Royal Devon and Exeter Hospital for their kindness in letting me make use of the notes of their cases.

Exeter.

BRIGHTON GUARDIANS AND OUTDOOR MEDICAL SERVICE.—Following on the retirement at Brighton of one of the medical officers under the guardians the board has decided to reduce the number of medical areas in the union from four to three, and raise the salaries of the two officers whose districts are enlarged from £125 to £155 per annum. The medico-political committee of the Brighton division of the British Medical Association wrote to the guardians, stating that while offering no objection to the rearrangement the committee respectfully suggested that the additional salaries are inadequate and should more nearly approximate to the sum hitherto paid for the same work, and pointing out that there had been no epidemics during the last few years, and that the medical work in the town generally had been considerably below the average. The guardians, however, were influenced by the result of the working of the Old Age Pension Act, for whereas on Dec. 31st, 1910, there were 1034 persons in receipt of outdoor relief, the figure on Nov. 12th, 1912, was 546.

THE SUPPRESSION OF THE CONVULSION IN ECLAMPSIA.[1]

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FIRST, it must be expressly stated that this note does not attempt to deal with the treatment of the cause of eclampsia. It relates solely to the suppression of what is usually the leading symptom in the eclamptic condition—the convulsion. The treatment of eclampsia cannot be carried out on rational lines so long as the pathology is obscure. Therefore, treatment must be symptomatic, and as the leading and most serious symptom of eclampsia is usually the convulsion, the control of the latter has been the chief aim and object of obstetricians for many years. Seitz[2] divides cases of eclampsia into three classes : (1) Cases in which the poison acts mainly on liver, kidneys, heart—coma ; (2) as in (1), but acts also on nerve centres—convulsions ; and (3) acts on nerve centres chiefly—convulsions predominate.

In the majority of cases convulsions occur, and control over them is necessary, because the fates of mother and child depend largely on the severity of the fits, and, when the latter are severe, on their frequency also. As a rule, the fœtus always dies when the fits have been severe—killed possibly by a toxin related to eclampsia, more probably asphyxiated during severe convulsion. For the mother the actual number of fits is not of supreme importance unless they are severe. Seitz[3] states that the highest mortality occurs in cases in which there have been from 16 to 30 fits (30 to 35 per cent.) ; the next highest mortality in those in which from 30 to 70 fits have occurred (33 per cent.). Severity is always of the gravest import, especially when the intervals between the attacks are marked by deep persistent coma or a condition of unconsciousness with never-ending restlessness, both indicating that to the eclamptic state there has been added some cerebral condition. And undoubtedly some eclamptics die, not from eclampsia, but from œdema or congestion of the brain, or from forcible rupture of cerebral vessels during the fit. Prutz[4] gives the following figures as a result of necropsies on eclamptics : Œdema of brain, 42 per cent. ; congestion, 30 per cent. ; apoplexy, 3 per cent. ; unaltered brains, 10 per cent.

Control of the Convulsion.

1. Reliance has been largely placed on chloroform, chloral, morphia, and veratrum viride or veratrone. The most recent upholder of the chloroform, chloral, and morphia treatment is Stroganoff, of St. Petersburg, whose reported results are truly astonishing. No doubt the drugs named have an influence in the treatment, but it should be pointed out that each patient is treated under conditions infinitely more favourable than have ever before been made use of, for she is placed at once in a totally darkened room that is isolated from all possibility of disturbance by external influences. There she remains with doctor and nurse—she is not disturbed in any way until light chloroform anæsthesia has been induced, even for hypodermic injections, catheterisation, administration of enemata, &c.—in a word, each one of her senses is guarded from every stimulus that might precipitate a convulsion in an eclamptic. Further, her nervous system is blunted by the administration of morphia and chloral, whilst chloroform is ever in reserve should a fit threaten.

Treatment begins immediately on admission, every eclamptic brought to the hospital receiving at once a hypodermic injection of morphia, gr. ¼. She is then anæsthetised and operative delivery is carried out if considered advisable. If the necessity for this does not exist the patient is placed in the isolated dark room and narcosis is maintained with morphia and chloral until well after delivery. Baths and hot packs are not given, any necessary washing being done with warm moist cloths. Stroganoff states that the careful execution of treatment on these

[1] A paper read before the Liverpool Medical Institution on Nov. 21st, 1912.
[2] Archiv für Gynäkologie, Band xxxix., p. 425.
[3] Loc. cit.
[4] Zeitschrift für Geburtshülfe und Gynäkologie 1892, Band xxiii., pp. 1–52.

lines prevents further convulsions in the majority of cases, and that delivery should take place without their occurrence. His statistics of over 400 cases yield a maternal mortality of 6·6 per cent., as compared with the usual 20 to 30 per cent.; and a fœtal mortality of 21·6 per cent., as compared with 30 to 50 per cent. In a smaller number of cases similar good results have been obtained in other continental clinics. The treatment could not be carried out in the present Liverpool Maternity Hospital, situated as it is on the brink of a railway cutting.

2. The use of hirudin—i.e., an active principle obtained from the chopped-up heads of the leech. In 1897 Volhard[5] recommended "the harmless leech extracts" in the treatment of eclampsia in order to nullify the alleged "fibrin ferments" or other substances which led to intravascular thromboses. He also pointed out that as the leech extract abolished the coagulability of the blood there would be great risk of fatal post-partum hæmorrhage. For this reason the proposal was not carried out for some years. Dienst[6] recently revived it, and last year Engelmann[7] published the results of intravenous injection of hirudin in 14 cases. He states that as the result of researches with placental extracts and the liquor amnii from eclamptic patients he formed the conclusion that they contained a poison which was absent from the liquor amnii of non-eclamptics, and that this poison was the cause of blood changes which led to the eclamptic outbreak. When large quantities of eclamptic liquor amnii were injected into the peritoneal cavities of guinea-pigs the animals died and the tissue changes found after death were identical with those described by Schmorl in eclamptics. In rabbits the intravenous injection of smaller quantities was followed by precisely similar results. But when hirudin was injected simultaneously with the eclamptic liquor amnii death did not occur, and after the animals had been killed no pathological changes were found.

Control researches with liquor amnii from non-eclamptics were negative, and Engelmann therefore concluded that there must be in the amniotic fluid of eclamptics some substance possessed of the power of coagulating the blood in the vessels, and that this thrombosis was followed by the necroses found post mortem in eclampsia. He claims that the eclamptic convulsion can be explained as the result of the intravascular thrombosis, and that it is unnecessary to presume the existence of a special "convulsion poison." Fourteen severe cases of eclampsia were therefore treated with hirudin, 0·2 to 0·3 grm. in at least 50 c.c. of Ringer's saline solution being injected intravenously. Of the 14 cases 8 died. In 2 out of the 14 the preparation seemed to exercise no influence, but of the remainder the convulsions ceased immediately in 4 cases, after one further attack in 3, after two in 1, and after three or four in 1. The general condition improved with the cessation of the fits. Engelmann is favourably impressed with the results of the treatment, but at the same time recognises it is only on trial and urges a more extensive trial of it in hospitals.

3. In December, 1910, Leith Murray[8] read before this society a paper on Puerperal Eclampsia, in which he made the suggestion that as intrathecal injections of solutions of magnesium sulphate had proved useful in tetanus they might also be of service in eclampsia. This very valuable suggestion has not received the recognition it merited, for the results in the treatment of tetanus have been at least encouraging. Crandon[9] states that of 206 cases of post-operative tetanus collected by various writers the large majority were fatal. Whereas, in an article in the *Therapeutic Gazette*,[10] Fox's collection of 15 acute cases of tetanus treated by intrathecal injections of magnesium sulphate yields a recovery rate of 50 per cent. In Blake's case[11] the injections controlled the convulsions for periods varying from 29 to 37 hours, and Blake considers that the use of magnesium sulphate is reasonably safe, and that it offers a means of modifying the convulsions and relieving pain in a way no other drug has approached. "When injected into the subdural space of the lumbar region the drug produces paralysis both of motion and sensation, at first in the lower extremities, and afterward in the trunk and upper extremities." In some of the cases on Fox's list more than one injection was required, as many as eight being given in two instances. Care in administration is needed, for too large a dose may lead to a fatal termination by causing paralysis of the respiratory centre, and therefore subcutaneous and intravenous administration are stated to be unsafe.

Recently, whilst fulfilling a term of duty at the Maternity Hospital, I had some conversation on the subject with Dr. Murray, and subsequently gave the treatment a trial in the two cases now to be reported. The usual 25 per cent. solution of magnesium sulphate was employed after sterilisation. The dose was regulated by the body-weight of the individual patient, 1 c.c. being allowed for every 25 lb. of body-weight. It is practically impossible to weigh eclamptic patients, and a rough estimation of weight had to be made from height and bulk. The needle was introduced in the middle line between the third and fourth lumbar spines.

CASE 1.—A woman, aged 30 years, 3 gravida. She was admitted to the Maternity Hospital on August 16th, 1912. The first fit occurred about 1 P.M., and there had been five altogether before admission at 5.30 P.M. The sixth fit took place soon after admission. Labour pains began about 6 P.M., and at 8.30 the seventh fit occurred. There was very little œdema, the legs being chiefly affected. The pulse was 80, hard and full. The urine contained a good deal of albumin. The patient was semi-conscious. During the 7½ hours up to 8.30 P.M. there had been seven fits. At 9 P.M., 4 c.c. of a 25 per cent. solution of magnesium sulphate were injected into the theca. Thereafter 1 oz. of magnesium sulphate in solution was run into the stomach, an alum enema was given, and the patient was placed in a hot pack. As no result followed aperient and enema they were repeated with a free result at 10.30 P.M. The patient remained unconscious and labour progressed steadily. No further fit occurred until 4 A.M. (August 17th)—that is, seven hours after the intrathecal injection. This fit was severe and was followed by a slighter one ten minutes later. Nothing further occurred until 9.20 A.M., when a living male child was born spontaneously. A slight fit, the tenth, occurred at 10 A.M. Thereafter the patient remained unconscious until the following day, when she was still drowsy and complained of slight headache. The pulse was full and slow, 55 per minute. During the first 12 hours after admission 17 ounces of urine were measured; during the two succeeding periods of 12 hours the total was 54 ounces. The headache disappeared two days later, but the drowsiness only gradually lessened. The subsequent progress of mother and child was uneventful.

CASE 2.—A woman, aged 32 years, a primipara at 8½ months' gestation, was admitted to the Maternity Hospital on Sept. 14th, 1912. The patient's face, eyes, body, and lower extremities were markedly œdematous. At 7 A.M. a fit had occurred, and there had been three more—two of them severe—up to admission at 9.30 A.M., when uterine contractions were noted. At 9.30 A.M. the fifth fit occurred. At 10.30 A.M. the sixth fit occurred; this was severe, there being a well-marked tonic stage lasting 30 seconds. At 11 A.M. an attempt made to inject magnesium sulphate solution into the theca was ineffectual on account of the patient's struggles; she was therefore anæsthetised and 6 c.c. of the 25 per cent. solution were injected. Some little difficulty was experienced in making this injection, as the needle could only be entered for a distance of 1½ inches, despite all attempts to evade what was thought to be an obstructing vertebral lamina. There was a good deal of œdema of the back, and therefore one expected that the needle would have to be passed for a distance exceeding the usual 2½ inches. Finally, however, the escape of fluid indicated that the needle had entered the canal after penetrating 1½ inches. At 11.30 A.M. lavage of the stomach was performed. 1 oz. of sulphate of magnesium in solution was run in the stomach. The lower bowel was washed out, but an enema was not retained on account of sphincteric paralysis. Vaginal examination showed that the cervix was not dilated. Catheterisation yielded 1 oz. of urine which solidified on heating. At 12.30 the patient vomited. At 2 P.M. the sister in charge noticed a grey stain of the size of a soup plate on the draw sheet. The latter was changed, and later a similar stain was soon noted on the fresh sheet, which was again replaced by a fresh one. The significance of these stains was not realised by the sister, and the matter was not reported. At 2.35 P.M., four hours and five minutes after the sixth fit, the seventh occurred. At 2.50 P.M. vomiting occurred from time to time, the patient being quite unconscious and very restless. A few uterine contractions had been noted at irregular intervals. The breathing was embarrassed and the face was slightly dusky. At first I thought that the magnesium sulphate might be responsible. My first act was to inspect the site of puncture, when I noticed a grey stain on the draw sheet, and then for the first time learned of the two earlier stains. The dressing was removed from the puncture and fluid was observed to be slowly oozing from it, so that it was probable that a good deal of the fluid injected had dribbled away, followed by an unknown quantity of cerebro-spinal fluid. At 3.15 P.M. the eighth fit occurred, moderately severe. The pulse-rate afterwards was 140; The respiration continued to be embarrassed and there was some hiccough. At 3.55 P.M. the ninth fit occurred, which was not severe. At 4.45 P.M., the bowels having failed to act, 3 minims of croton oil were given by the mouth. At 4.55 the cannula was introduced through the first puncture and another 6 c.c. of the solution run into the theca. The puncture was closed by a suture. No anæsthetic was necessary for this injection. At 5.25 P.M. a hot pack was given. At 5.30 P.M. the patient perspired freely. Subcutaneous perfusion of two pints of saline. At 4.45 P.M. the eleventh and final fit occurred, which was severe. At 7.5 P.M. the dyspnœa had steadily diminished since the second intrathecal injection. A decided amelioration in the general condition was perceptible. At 9.0 P.M. the uterus was contracting strongly, and at 10.20 a living male child was born. Consciousness was regained in the afternoon of the following day, but the mental condition remained unsatisfactory for a week. For some days the patient was very restless, and had some delusions and insomnia. Her speech was staccato and the voice high-pitched. These conditions gradually subsided, and when she left hospital the patient was apparently mentally sound.

[5] Inaugural Dissertation, 1897, quoted by F. Engelmann, loc. cit.
[6] Zentralblatt für Gynäkologie, 1909, p. 1697.
[7] Zeitschrift für Geburtshülfe und Gynäkologie, 1911, Band lxviii., p. 640.
[8] Brit. Med. Jour., 1911, vol. i.
[9] Surgical After-treatment, 1912, p. 293.
[10] Therapeutic Gazette 1911, vol. xxxv., p. 730.
[11] Surgery, Gynæcology, and Obstetrics, May, 1906.

It is impossible to draw conclusions from two cases, but I would call attention to two points. 1. In each case after injection an interval of freedom from convulsions ensued. In Case 1 seven fits occurred during the seven and a half hours preceding injection, none during the subsequent seven hours. In Case 2 six fits preceded the injection (three of them were severe), whilst none occurred during the following four hours. The anæsthetic used may have contributed to this quiescence, but it could not have been responsible for the second interval of four and a half hours after the second injection. 2. Case 1 was an ordinary one of eclampsia; the patient would probably have recovered in any case and the child might have been born alive. On the other hand, Case 2 was a severe one and the outcome was doubtful. I feel assured that but for the two intervals of four and four and a half hours respectively, a dead child would have been born. What is now required is proof that there is direct connexion between the intrathecal injections and the after-quiescence, and only an extended trial of the method can settle this point.

Murphy [12] has employed intrathecal injections of morphia and eucaine in tetanus with good result, and it is possible they might be useful in eclampsia also. The dose used was extremely small (morphia gr. 1/75, eucaine gr. 3/50), so that the danger of adding further poisons to a blood already overloaded with them is very slight. I would again repeat that treatment of this kind is purely symptomatic, but if it even only diminishes the intensity and the number of the convulsions the patient's strength is thereby conserved, visceral damage is lessened, whilst time is given for the treatment of the disease itself.

Liverpool.

EIGHT CASES OF OSTEOMYELITIS OF THE SPINE.

BY G. R. STRONG, M.B., B.S. LOND.

The first of these cases came under my notice while house surgeon to Mr. W. G. Spencer at Westminster Hospital. I propose to report it somewhat fully, and then to give a brief account of the other cases.

CASE 1.—The patient, a boy aged ten years, was admitted to Westminster Hospital under the care of Mr. Spencer on Feb. 5th, 1911. He was sent up by Dr. R. R. Elworthy, of Golder's Green, who diagnosed acute osteomyelitis of the spine.

The history, as obtained from the patient and his mother, was as follows:—Three weeks before admission he was kicked in the back by a boy at school. A fortnight later—i.e., a week before he was first seen, he had a fit of shivering and felt shooting pains in the lower part of the back and in both sides. He had several more rigors during the next few days, and vomited once four days before admission. The pain in the back and sides continued. On Feb. 5th he was seen by Dr. Elworthy, who immediately sent him to the hospital.

On admission the boy was evidently in great pain; he lay on his left side with his legs drawn up, both cheeks were flushed, and his tongue was thickly furred. The temperature was 101.2 F., the pulse 116, full and bounding. There was an extremely tender, red, œdematous swelling over the spines in the dorsi-lumbar region. He was seen by Mr. Spencer, who decided to operate at once.

Operation.—An incision was made over the swelling, and the periosteum was found to be stripped up from the spines of the last dorsal and first lumbar vertebræ by pus. The underlying bone was of a dusky red colour and was riddled with pus. The two affected spines and part of the corresponding laminæ were removed, the cavity was swabbed out with pure carbolic acid and crystals of iodoform freely sprinkled in. A drainage-tube was inserted and the wound plugged with iodoform gauze. The wound was fomented and irrigated with hydrogen peroxide. The pus was examined by Dr. R. G. Hebb, who reported as follows:—Smears: staphylococci. Tubercle bacilli not found. Culture: staphylococci, colonies greyish white. A leucocyte count, made the following day, was as follows: leucocytes, 19,760 per c.mm.; polymorphs, 85 per cent.

The temperature remained fairly high, but there was never any sign of extension of the disease in the spine. The tongue became moist and fairly clean. The patient appeared to be tender all over, crying out when touched, especially on the back and legs. He could move his legs, but full extension of the left was painful. A vaccine was prepared by Dr. D. W. Carmalt-Jones from the organisms grown from the pus. The first dose, 20,000,000, was given on Feb. 10th, without any apparent effect. On the 11th the whole of the left thigh was found to be tender to the touch and the lower end was red and swollen.

On Feb. 14th, on the supposition that a secondary abscess had formed in the femur, Mr. Spencer explored. An incision was made over the external condyle, and the bone was bored with a bradawl, but no pus was found. A further dose of vaccine, 40,000,000, was also given. On the 16th the temperature rose to 104·4°, and on the 17th to 105°, with a pulse-rate of 164 and respirations 40. The signs in the left thigh were more marked. The medulla of the left femur was then freely exposed with a gouge, but no pus was obtained. It soon became evident that the cause of the swelling was thrombosis, probably septic, of the femoral vein. The leg was kept raised, and the swelling gradually subsided. During the next 20 days the temperature was generally between 103° and 104°, the pulse-rate varying from 132 to 164. The boy was very ill, and morphia was frequently given. Vaccines were continued: Feb. 18th, 40,000,000; 23rd, 60,000,000; 27th, 100,000,000; March 4th, 100,000,000.

On March 3rd Dr. Carmalt-Jones, considering that the vaccine was not benefiting the patient, made a blood cultivation. A staphylococcus was grown, in all respects resembling that in the pus, and a vaccine prepared from it. The patient was given 25,000,000 of it on March 10th. On the evening of the 11th the temperature was 105°, and at 3 o'clock the following morning the temperature was 104°, the pulse 176, and the respirations 40. The patient appeared to be on the point of death, and an injection of strychnine was given. It was then decided to abandon the use of vaccines.

On March 13th the right thigh was observed to be swollen and œdematous, and subsequently went through similar changes to those previously undergone by the left. Throughout this the tongue had remained moist and clean—the one hopeful sign in the case. On the 14th he began definitely to improve; the temperature fell very gradually, becoming normal on March 28th. Since then he has had several rises of temperature, lasting from 24 to 48 hours, but they have not been accompanied by any symptoms. On April 12th he was allowed out of bed for the first time.

A source of considerable trouble was the state of his legs. Owing to the position in which he habitually lay with his legs drawn up—he was, of course, far too ill to permit of any attempt being made to keep them straight—both knes were flexed. After a week or two the right leg was straight, but the left remained flexed, although it has gradually become straighter. The boy went to a convalescent home on May 4th; although rather weak on the legs and with considerable stiffness in the left, he looked well. He had been putting on flesh rapidly for several weeks.

There were a number of enlarged superficial veins running from about the middle of both thighs up to the front of the chest. He probably has thrombosis of the vena cava, or at any rate both common iliac veins, but has never been observed to suffer any inconvenience therefrom.

Since the above was written the boy has left the convalescent home and presented himself at the hospital. He was apparently in perfect health, quite fat, and walked normally. The veins over the front of the abdomen and chest were more prominent than ever.

The other cases I found in the post-mortem books at Westminster Hospital, referring afterwards to the clinical notes. The post-mortem reports are in every case taken from notes made at the time by Dr. Hebb

CASE 2.—Male, aged 9 years. Under care of Mr. Richard Davy. Admitted July 19th, 1887. Well and strong until 19 months before admission, when he fell off a wall 6 feet high on to his right shoulder. He continued going to school for eight months, then found that he was unable to lace up his boots. He went to bed and continued to lie on his back until admission to the hospital. He had pain at times "like pin-pricks," but none at time of admission. He died May 7th, 1888.

Post-mortem report.—Angular curvature at the cervici-dorsal junction. Right pleura much thickened and adherent posteriorly; in front the sac contains much purulent lymph, and the pleural surfaces are covered with a thick layer of lymph. There is a suppurative pleuritis with effusion on the left side also. With the exception of being compressed slightly by the effused fluid the lungs are quite healthy. Liver 53 oz., amyloid. Spleen 5¼ oz., amyloid. Kidneys and mucosa of the stomach also amyloid. The spinal column from the seventh cervical to the eleventh dorsal vertebra is necrosed, the bodies are hard, dry, and dead, and the cartilages have entirely disappeared. There is no caries or softening of the bone. The necrosed part is bathed in pus, which is enclosed by the fibrous tissues enveloping the column.

CASE 3.—Female, aged 5¼ years. Under the care of the late Mr. T. Bond. Admitted Sept. 17th, 1894. The patient was in the hospital in January with lumbar abscess; a diagnosis of Pott's disease was made. The abscess was opened, and the condition of the child improved. She was sent to a convalescent home for four months, but was readmitted with a fresh collection of pus in the left loin. This was opened and daily irrigated, but the temperature assumed the hectic type and death occurred on Dec. 10th, 1894. The temperature was generally about 102° F., but once reached 104°. There was an indefinite history of a fall.

Post-mortem report.—Body much emaciated; œdema of legs and feet; angular curvature in lower dorsal region. The bodies of all the dorsal vertebræ are necrosed; parts of the bodies remain and are dark and firm; there is no caries or caseation, but in front of the vertebral column is a long canal lined by a pyogenic membrane which connects on either side with a psoas abscess. Brain, spinal cord, and membranes normal. Left pleural surfaces adherent—old. Lungs normal; no enlargement of mediastinal glands. No amyloid disease. Bladder contracted. *There is no appearance of tuberculosis in any part of the body.*

CASE 4.—Female, aged 20 years. Under the care of Mr. Spencer. Admitted Nov. 11th, 1896, for pain in the back, shooting round to the front. She had been treated for some time with a poroplastic jacket for posterior spinal curvature. Large fluctuating swelling over the left side of the dorsal spine. Knee-jerks slightly exaggerated. Diagnosed as tuberculosis of the spine. Abscess opened and found to communicate with posterior mediastinum and left pleura, out of which a large quantity of pus came. Piece of rib removed, and the border of the dorsal vertebræ felt bare. Temperature varied between 99° and 105° F. Previous to operation was only about 100°. Pulse 120 to 160. Death occurred on Dec. 19th, 1896.

Post-mortem report.—Body fairly well nourished. Angular curvature of lower dorsal region. The front of the bodies of the third to the tenth dorsal vertebræ are bare, rough, and hard, except the ninth, which is necrosed. The necrosis is dry, hard, and blackish. The intervertebral discs are not affected. Left pleura much thickened; sac contains 5 oz. of yellow curdy lymph. Left lung much shrunken. Right lung fairly normal. Recent pleuritis with firm adhesions of right pleura. In front of the vertebræ is a small collection of sanio-purulent fluid. There is no connexion (post mortem) between the empyema cavity and the pre-vertebral abscess. *No caseation or tuberculosis in thoracic or abdominal viscera*

[12] Journal of the American Medical Association, August 13th, 1904.

CASE 5.—Female aged 34. Under the care of Mr C. Stonham. Admitted Nov. 11th, 1896, with a history that she had never been well since a confinement two years before, since when she had been ailing with pain in the back and right loin. No treatment until five weeks before admission, when the pain became worse and a swelling appeared in the right loin. On admission she was found to have a fluctuating swelling which pointed in the right loin; felt in front, but not easily. Prominence of lower dorsal and upper lumbar spines. Heavy cloud of albumin in the urine. Nov. 18th: Abscess opened, scraped, and flushed. Bare bone found, which seemed about the first lumbar vertebra. The wound was sewn up. Dec. 2nd: The patient was much worse. Dec. 31st: Dulness of right chest; pulse very feeble, breathing bad. She gradually became worse, and died on Jan. 2nd, 1897. The temperature varied from normal to 103° F., average about 102°. Subnormal four days before death. Pulse about 128 during the last few days, 140 just before death. No tubercle bacilli were found in the pus obtained at the operation, but cocci, mostly in short chains.

Post-mortem report.—Surgical wound in right flank; aperture leads into mass of subperitoneal fibrosis tunnelled up by fistulous passages, which are in connexion with the right side of the twelfth dorsal vertebra. Angular curvature at end of dorsal region. On vertical section of the spinal column the bodies of eleventh and twelfth dorsal and first lumbar vertebræ are seen to be firmly united, their intervertebral discs having disappeared; also there is a prevertebral abscess, ascending as high as the sixth dorsal vertebra, bulging out on either side, but chiefly in right thorax. The pus is greenish-yellow. The discs from seventh to tenth dorsal vertebræ are almost entirely destroyed, and the bodies of these vertebræ are more or less exposed, the bones being dry and hard (sclerosed). The disc between tenth and eleventh vertebræ seems normal. In the right pleural sac there is quite half a pint of greasy yellow pus and some lymph; no direct connexion found between empyema and prevertebral abscess. No pneumonia. Stomach showed numerous small erosive ulcers. Liver 63 oz., very soft. Spleen amyloid. Kidneys typical "large white." No obvious reaction with iodine. No evidence of tuberculosis.

CASE 6.—Male, aged 33. Under the care of Mr. W. G. Spencer. Admitted Jan. 23rd, 1905, with pain in back and legs. Patient was a labourer. Sixteen years before he had gonorrhœa; three years before admission arthritis of ankle and knee. Alcoholism admitted, but not during last 12 months. Six months before he had severe epigastric pains, worse after food, with attacks of vomiting; at that time he lost weight (12 st. 3 lb. to 10st. 4 lb.) but afterwards picked up somewhat. Seven days before admission first had pain in back and legs.

Jan. 29th: Temperature remitting from 103·8° to 98·8° F. No abnormal physical signs. Jan. 31st: Leucocytosis 12,000, polymorphs 86 per cent. Feb. 12th: Orchitis, yielding to potassium iodide. March 2nd: Pupillary light reaction sluggish. Knee-jerks absent, some dorsal anæsthesia. Third, fourth, and fifth lumbar vertebræ showed some thickening on left side. March 20th: Lump felt to left of umbilicus. March 29th: Angular curvature suddenly developed. April 1st: Weakness and wasting of both legs; no rigidity and no sensory defect. Plantar reflex normal. Abscess opened and drained. No subsequent increase of the paralytic symptoms, and temperature showed decided improvement, but acute diarrhœa set in on April 25th, and the patient died the following day. Just before death the temperature was 105·6°, respirations 60, and pulse uncountable.

Post-mortem report.—Œdematous swelling of right leg. Surgical incision transversely across the fourth lumbar vertebra, leading to gaping cavity of sacro-lumbar junction, due to almost total disappearance of bodies of third and fourth lumbar vertebræ. (The figure is here referred to.) Diffuse suppuration and necrosis of both iliac muscles, and some curdy pus in the left hip. Displacement of the spine, forming an angle of about 80°, bulging into the pelvis. Spinal canal normal. Perisplenitis, acute cystitis, muco-pus and lymph in left pleura; left lung shows number of small abscesses; right lung normal; aorta shows septic aortitis—whitish flakes scattered over aorta, some raised patches (staphylococcic).

CASE 7.—Male, aged 38 years. Under the care of Mr. Spencer. Admitted April 13th, 1906, with septic finger, pains in back and sides. Occupation, van-man. Sixteen weeks before admission his hands were chapped and one finger became infected. This was incised at another hospital three weeks later. Swelling appeared in axilla three weeks before admission. On admission a large tense fluctuating swelling was found, tender to the touch, over third and fourth ribs in right axillary space, apparently continuous with similar swelling over same ribs posteriorly. Rigidity of spine in upper dorsal region. Kyphosis and right scoliosis. Slight cough, fair amount of expectoration, no hæmoptysis. He had lost flesh a good deal.

April 27th: Abscess in connexion with knee-joint incised. The pus was found to contain staphylococcus aureus only. May 9th: Wounds in finger and tibia nearly healed. Complained of pain in back, aggravated by movement. Angular curvature in lower dorsal region increasing. Knee-jerks exaggerated. May 16th: Increasing bronchitis with dyspnœa. Died on May 25th.

The axillary swelling had been opened at some time and found to be a subscapular abscess, but the notes do not mention it. The pus contained two kinds of cocci, one large in clusters, the other smaller, and in short chains. Also a Gram-negative bacillus. The culture grew staphylococcus aureus only.

Post-mortem report.—Angular curvature lower dorsal region; large collection of pus close to spine in back muscles of loins. Surgical wound in right thorax (axillary). Body of eleventh dorsal vertebra and adjacent parts of tenth and twelfth in condition of necrosis. Adjacent parts of tenth and eleventh ribs also necrosed; dead bone is blackish-green, and in small pieces; dry. Spinal cord and membranes adherent to column and in condition of suppurative meningo-myelitis for distance of three inches. Lungs large, pigmented, very œdematous, much engorged at bases. Lower two-thirds of upper lobes show broncho-pneumonia; bronchitis; pleuræ adherent over lower two-thirds. Purulent cystitis. Kidneys large, hyperæmic, with numerous miliary abscesses; left seminal vesicle shows septic necrosis. Pus contains a streptococcus and a Gram-negative bacillus (probably B. coli). *No evidence of tuberculosis anywhere.*

Microscopical examination.—Spinal cord: some myelitis, chiefly in posterior columns, and hyperæmia. Kidneys: miliary abscesses with hæmatoxylin-staining cocci in the centre. Prostate: large miliary abscess. Culture staphylococcus aureus.

CASE 8.—Male, aged 31. Under the care of Dr. R. G. Hebb and the late Dr. Bertram Abrahams. Admitted June 20th, 1907, for paraplegia and retention of urine. Patient was a bricklayer. About two months before admission he had pains in the back and hypochondrium; towards end of May girdle pain and sense of constriction in the upper half of abdomen; then gave up work. During second week in June had retention of urine and constipation; palsy of legs four days before admission—ingravescent. On admission, sensation impaired below level of ninth segment. Curvature in mid-dorsal region noticed July 1st. Anal abscess burst July 16th. Pneumonia July 26th. Pus from pelvic abscess showed crowds of bacteria but no tubercle bacilli (cocci and Gram-positive and Gram-negative bacilli). Death on July 28th, 1907. The temperature varied from normal to 103° F., generally about 102°. Pulse and respiration not noted until shortly before death, then 140 and 28 to 60 respectively.

Post-mortem report.—Body extremely emaciated; sloughing of skin round anus; aperture leads into pelvis, connective tissue of which is in condition of diffuse suppurative cellulitis. Prevertebral abscess in mid-dorsal region, involving bodies of sixth to ninth dorsal vertebræ. Bodies are black and hard, intervertebral discs absent, or partly so, those between seventh, eighth, and ninth having disappeared. Abscess has burrowed between bone and dura mater, filling canal with pus; it has also burst into both pleuræ and perforated the posterior wall of œsophagus in two places close together. No direct connexion between

Specimen of lumbar and sacral vertebræ from Case 6.
(Westminster Hospital museum.)

prevertebral abscess and pelvic cellulitis. Lungs engorged, friable, pneumonic, and studded with grey irregular areas of consolidation. Bladder—septic cystitis. *No evidence of tuberculosis in any part of the body.* Death from pneumonia.

There are many shortcomings in the notes of the cases, but I have made the best I can of them. None of them have been published before, and I have thought it worth while to place them on record for two reasons. Firstly, because the disease is undoubtedly a rare one, although I suspect it to be commoner than is generally believed, and it cannot fail to be useful to add to the somewhat meagre number of recorded cases. Kirmisson (*vide infra*) says: "In April, 1909, we should have difficulty in collecting 100 cases." Secondly, the cases serve to point a moral as regards diagnosis, as I hope to show later.

Although a few isolated cases had been reported previously, the first important contribution to the literature of

the subject appears to have been that by Makins and Abbott,[1] who collected 21 cases in 1896. In 1900 Hahn[2] collected 41 cases, Riese[3] published 4, and Grisel[4] gave an account of 64 cases in 1903. Of course, some of the same cases figure in several of these papers. Good accounts of the disease are to be found in "Keen's Surgery"[5] and in von Bergmann's "System of Practical Surgery."[6] I shall again refer to these later. Most of the text-books in ordinary use merely give the subject passing notice.

In comparing these cases one is at once struck by the fact that in No. 1 the arches of the vertebræ were the seat of the disease, whereas in all the others the bodies were attacked. The prognosis is naturally better in such cases as the former, since both diagnosis and treatment are considerably easier. Kirmisson[7] reports a case of necrosis of the spines, with recovery, and in the course of a clinical lecture gives an excellent account of the disease in general. He gives the following statistics: disease in bodies, 7 recoveries, 28 deaths; disease in arches, 16 recoveries, 8 deaths.

The death-rate of the disease in general is variously given by different writers. Makins and Abbott find it to be 71·4 per cent., and have little hope that this large number will be substantially reduced, whereas Kirmisson, quoting Grisel, puts the mortality at 59·6, or, excluding the sub-occipital cases, 57·1, and hopes that this number may be considerably lessened in the future. Certainly the later papers show a decidedly lower death-rate than the earlier ones. Since seven of the present cases were obtained from the post-mortem books it is obvious that no deductions can be made from them as to death-rate. Nevertheless, although I spent a considerable time in searching, I failed to find any more cases in the hospital records.

A number of complications occur in these cases, and in several of them such complications were the actual cause of death. Pleurisy or empyema occurred in all the fatal cases, pneumonia in two, miliary abscesses in lung in one, miliary abscesses in kidneys and prostate, and necrosis of a seminal vesicle in one, amyloid disease in two, perisplenitis and septic aortitis in one, acute cystitis in three, erosive ulcers of stomach in one. There was apparently femoral thrombosis in two of the fatal cases, and in Case 1. Angular curvature was present in all the fatal cases, associated in six of them with vertebral abscesses; in one with necrosis of iliac muscles, in another with abscess in the hip, with subscapular abscess in one, and in one case with pelvic cellulitis. Meningomyelitis was present in one case. Many went on to septicæmia, including Case 1. The kidney condition found in Case 5, typical large white kidney, is interesting. Was the nephritis caused by the toxæmia of osteomyelitis, or was it a pre-existing disease?

The symptoms which first caused the patients to seek treatment are worth considering. They are: Pain, Cases 1, 4, and 6; pain and lumbar abscess, Case 5; pain in back and sides, septic finger, Case 7; lumbar abscess, Case 3; paralytic symptoms, Case 8. Case 2 is rather doubtful, but it appears as if the patient consulted a doctor because of inability to bend his back. The actual cause of osteomyelitis of the spine is, as in other bones, usually the staphylococcus aureus. As to the predisposing causes, a history of injury is common, and is to be found in the notes of several of the present series. Kirmisson lays great stress upon overwork and unhealthy conditions of living; this may have obtained in any of these cases, although it is not specifically mentioned. Henle[8] says: "In one case a whitlow was believed to have afforded entrance" to the organisms; Case 7 is another example. Other predisposing causes given by Kirmisson are cold and fatigue, antecedent infections, and puerperal infection (see Case 5).

Turning to the question of treatment, there is no doubt that in immediate operation lies the only hope of saving life, except, perhaps, in typhoid cases, but as to the details to be observed authorities are not quite agreed. Makins and Abbott advise the opening of abscesses and the removal of necrosed bone, considering the latter specially important in cases where the arches are affected. This was done by Mr. Spencer in Case 1. Kirmisson, on the other hand, while recommending large incisions, wiping out with pure carbolic and neutralising with alcohol, urges that the bone itself should be left alone, otherwise he considers that one will be led into severe and often incomplete operations. A disappointing feature of Case 1 was the utter failure of vaccine therapy; nevertheless, at the present day I think everyone would be disposed to give it a trial, although in an acute case extreme caution is necessary.

I have left the discussion of diagnosis until last because it is in this connexion that I believe a study of these cases to be of most value. On reading the accounts of them one cannot fail to be struck with the close resemblance that many of them bore to Pott's disease; indeed, several were actually diagnosed as such. I feel confident that many of the cases running a less acute course are wrongly diagnosed as tuberculous; people are not alive to the possibility of osteomyelitis. With a little more care it should be possible to distinguish the two diseases in nearly every case. Of course, acute cases such as No. 1 could hardly be confused with Pott's disease, but the more chronic ones can and frequently are. Kirmisson mentions the following points of distinction: the abscess of Pott's disease most often appears externally in Petit's triangle, and is roundish, whereas the abscess of osteomyelitis spreads along the vertebral column and is fusiform and oblong. Especially important are evidences of secondary circulation in the skin round the abscess, owing to septic thrombosis in the spinal veins. The latter phenomenon was not observed in any case of the present series, and lumbar abscess was present in Nos. 3 and 5.

I would urge that all cases of spinal disease, except those of some years' standing, should be thoroughly investigated by all the means at our disposal; the various tests for tuberculosis, such as the von Pirquet reaction, the injection of tuberculin, and the opsonic index, should all be performed; a leucocyte count and a blood cultivation should be done; any spinal swelling should be aspirated with an exploring syringe, and the fluid obtained should be examined bacteriologically and cytologically; the spinal column should be radiographed. If any doubt still remained, an exploratory incision should be made. If this were done in all cases of Pott's disease it is safe to say that osteomyelitis of the spine would soon become a commoner disease than it is at the present time. Of course I do not suggest that all this should be done in a typical and undoubted case of tuberculosis of the spine, but I would point out that the four classical symptoms of Pott's disease—viz., pain, rigidity, deformity, and pressure symptoms—may all occur in osteomyelitis. Rigidity has been said by various writers not to occur, but the post-mortem report of Case 5 is a sufficient refutation of such a statement.

I am indebted to Dr. Hebb, Mr. Stonham, and Mr. Spencer for permission to publish these cases, and to Dr. Hebb especially for drawing my attention to the cases in the post-mortem books. My thanks are also due to Dr. Braxton Hicks, curator of the museum, for the loan of the specimen illustrated.

Magor, Monmouthshire.

[1] Makins and Abbott: Annals of Surgery, 1896, vol. xxiii., pp. 510-539.
[2] Hahn: Beiträge zur Klinischen Chirurgie, Band xxv., p. 1.
[3] Riese, quoted by Henle.
[4] Grisel, quoted by Kirmisson.
[5] Woolsey: Keen's Surgery, vol. ii., p. 829.
[6] Henle: Von Bergmann's System of Practical Surgery, English translation, vol. ii., p. 697.
[7] Kirmisson: Presse Médicale, 1909, pp. 337-8.
[8] Loc. cit.

CANCER HOSPITAL, MANCHESTER.—The annual meeting of supporters of Christie Hospital, Manchester, was held on Nov. 28th. The hospital provides medical and surgical advice and relief for persons suffering from cancer. It also provides a home for a limited number of incurable cases; and, lastly, it exists to study the disease thoroughly and scientifically with a view to the discovery of the causes and means of prevention and cure. During the year 105 in-patients and 33 out-patients were treated. The subscriptions had fallen slightly, but the contributions from patients and their friends had increased from £181 to £239. The year's income was £7648 and the expenditure £7319. The death-rate from cancer was said to have doubled in Manchester since 1881. The hospital is still without funds to carry on efficiently original investigations regarding cancer, though all is being done in the direction that can be done with the limited means at the disposal of the hospital authorities for this purpose.

EPITHELIAL PROLIFERATION INDUCED BY THE INJECTION OF GASWORKS TAR.

BY H. BAYON, M.D.,

RESEARCH BACTERIOLOGIST, ROBBEN ISLAND, CAPE COLONY; LATE BEIT MEMORIAL RESEARCH FELLOW.

RESEARCH for the discovery of the ultimate factor of cancer can be grouped in two general lines of investigation: one connected with the study of exterior etiological causes, such as parasites, mechanical or traumatic irritation, &c.; and another which considers endogenous factors such as age, inherited predisposition, embryonal remnants, changes in the connective tissue, and so forth. These two big groups can be subdivided again into a series of smaller individual hypotheses or theories, such as the belief in strictly specific agents, an absolutely definite cancer cell from the very earliest beginning of its existence (Bard: *Omnis cellula e cellula ejusdem generis*); or the acceptation of metaplasia, otherwise Hansemann's "anaplasia"—i.e., the gradual or sudden change of the normal epithelium, which proliferates within definite boundaries, into cancer which grows in all directions, destroying the tissues it invades, and forming metastatic deposits far from its initial site of inception.

The consideration of the point of view that cancerous tissue is epithelium which has acquired malignant properties still leaves the question wholly unsolved as to the reason of this alteration, which von Hansemann, considering it as something different from metaplasia, has called "anaplasia." The views which have been brought forward to explain this change have so far lacked the experimental support which enables them to rank as theories in contradistinction from hypotheses or speculations.

H. C. Ross and J. W. Cropper, however, have lately investigated the properties of a series of chemical substances by means of the "jelly method" which they devised. These substances they found are capable of stimulating cell division *in vitro*, and accordingly have been called "auxetics." Ross believes, moreover, that they have a direct bearing on the alteration of epithelium into cancerous tissue. I accordingly thought that it might be worth while to control these results by an absolutely independent method, such as animal experiments, with the expectation that I might be able to cause epithelium to proliferate by means of "auxetics," and therefore imitate in some fashion the histological appearances of the initial stages of cancer, according to the point of view of these authors.

Several auxetics were tried, and I have some remarkable specimens as the result of them; but in the present paper I propose to confine myself to the consideration of watery extracts of blast furnace and gasworks tar, in view of the peculiar behaviour of the latter substance as a factor in the production of a definite and well-known form of cancer. Blast furnace tar, on the other hand, is known to be harmless under the same circumstances. For this purpose Dr. Ross and Dr. Cropper gave me some watery extract of both sorts of tar. These I mixed, and emulsified by shaking, in proportion of 1 in 4, with lanoline, which I had previously sterilised by heating for three days at 60° C. The watery extracts had also been sterilised in an identical fashion. Half a cubic centimetre of this mixture was injected with aseptic precautions into the subcutis of the ear of a young rabbit. Controls with lanoline alone were injected into the corresponding ear of each animal. The rabbits were killed after four weeks, and the nodules caused by the injection were fixed in 4 per cent. formaldehyde and imbedded in the usual way in paraffin.

A microscopical examination of the specimens showed the following features. In the blast furnace tar sections (Fig. 1) a clear space in the centre of the field of view was filled by a homogeneous colloid or plasmatic liquid without any cellular admixture. There was no definite wall or connective tissue envelope such as generally would be found in a cyst, but the fluid seemed to be contained in an epithelial lining, which in parts was exceedingly thin, so as to consist of two or three layers of cells only. In places a slight proliferation had taken place, with the result that the epithelium was somewhat thicker, and they presented a ragged appearance due to a slight protrusion of epithelial plugs or knobs into the lumen of the cavity. In other places a slight congregation of small round cells with a deeply staining nucleus was visible on the margin of the epithelial ledge. But the amount of tissue reaction was in every case very minimal. A few and very small horny cell-nests were present, such as are produced by the incasing of epithelial cells of low vitality by the rapidly proliferating epithelium. These cell-nests were rare and small, and on the whole no marked difference could be detected when compared with the

FIG. 1.

Section of rabbit's ear injected with watery extract of blast-furnace tar.

corresponding controls where lanoline alone had been injected.

On the other hand, the gasworks tar specimens (Fig. 2) presented quite another appearance. The cavity caused by the liquid lanoline injected was filled by cellular débris, several of which were unrecognisable, but others could be made out to be cast-off epithelial cells and leucocytes. The epithelium round the lanoline injected had abundantly proliferated so as to form a thick wall all round, from which epithelial plugs and protrusions took their origin. This was accompanied by a certain amount of round-celled infiltration. Epithelial cell-nests were both numerous and of considerable size, and presented the stratified appearance which is so distinctive in some cases of squamous-celled carcinoma of the body surface.

The difference between the two sections was so considerable and evident as clearly to demonstrate the deleterious

FIG. 2.

Section of rabbit's ear injected with watery extract of gasworks tar.

properties of gasworks tar towards epithelial tissue, and explains to a certain point its capacity of producing and preparing a receptive situation for a cancerous growth. Of course, it is needless to insist on the fact that these growths differ from true cancer in one very important feature, because, although the epithelium was seen to proliferate actively, still it did not invade the lymphatics and caused no metastatic nodules. For the moment, it is sufficient to settle the observation of "auxetic" properties in gasworks tar when compared with blast furnace tar; and it demonstrates the fact in an easy experiment. The study of the biological features of these epithelial proliferations is a matter for further research.

ACUTE INVERSION OF THE UTERUS.

BY JOHN H. AYTOUN, M.D., C.M. EDIN.

ACUTE inversion of the uterus in labour is of such extreme rarity that probably relatively few of the authors of text-books on obstetrics have met with a case in their own practice. This, I think, may account to some extent for the somewhat vague description of the method of effecting reinversion which is frequently given in such works.

That considerable, and sometimes insurmountable, difficulty is often experienced in effecting reinversion of the uterus, even when the accident is recent, is evident from the history of some of the cases of chronic inversion occasionally met with, as well as from some published cases. Thus in a case reported by Dr. Robert Boxall,[1] a medical man failed to effect reinversion when the inversion occurred; another medical man several hours later also failed; and Dr. Boxall, who saw the case in consultation about forty-eight hours after the accident, gave up the attempt at reinversion, even with the assistance of chloroform. In Vol. X. of the Transactions of the Obstetrical Society of London, also, an account of a case where immediate reinversion could not be effected is given. Any delay in attempting to reinvert the uterus enormously increases the difficulty. It is noteworthy that in about 50 per cent. of all cases the patient is a primipara. The predisposing causes of this accident during, or shortly after, the third stage of labour are general dilatation of the uterus, relaxation of its muscular walls, fundal implantation of the placenta, adherent placenta, and over-dilatation of the cervix and lower uterine segment by the recent passage through them of a large child. To these, I think, should also be added primiparity.

A case of some interest in this connexion occurred in the practice of Dr. A. L. Galabin, who showed the specimen in 1887.[2] This was a uterus removed by Porro's operation. At the time of operating there was an eversion of the placenta, which was attached to the posterior wall, through the incision in the anterior wall, so that the posterior wall had become concave externally. This was evidently due to the contraction of the inner fibres having been impeded by the still attached placenta, while the outer fibres had contracted more freely. I think that this kind of action must be more marked when the placenta is unduly adherent and situated at the fundus uteri. It seems to be almost sufficient to account for cases of spontaneous inversion. The exciting causes are: excessive intra-abdominal pressure; excessive traction upon the umbilical cord before the separation of the placenta; or both acting together. If the accident happens at all rapidly, one or more of both predisposing and exciting causes must be present and act at the same time.

Extreme traction upon the cord is, no doubt, sufficient to produce inversion of the uterus, provided that several of the predisposing causes are present. But in their absence, when the placenta is adherent, I believe that such traction would result in the cord giving way or being torn from its insertion into the placenta.

I have seen a large number of cases in which the placenta has admittedly been removed by moderate traction upon the cord, but have never known any very bad effects to follow the practice.

Anyone who has had to separate an adherent placenta with a hand in the uterus must have noticed the relative thinness and flaccidity of the uterine wall at the part where the placenta is attached when compared with the rest of the upper uterine segment. This is the part of the uterine wall where inversion nearly always begins; and, should the placenta happen to be attached to the fundus uteri, the tendency to the occurrence of inversion must be considerably increased, as, if downward cupping of the fundus uteri once occurs to such an extent as to allow the inverted portion to be compressed by the rest of the uterine wall, the uterine contractions tend to expel this inverted portion through the cervix, and thus more or less complete inversion of the uterus occurs. Fortunately the cupping at the placental site is very rarely so marked as to permit of this foreign-body action coming into play, and in such cases the uterine contractions, when they occur, tend to restore the uterus to its normal shape by undoing the cupped condition.

In reporting the following case I wish to draw attention to a method of effecting reinversion which proved to be safer and more effective than that usually described.

The patient, aged 20 years, primipara, was an exceedingly pale, thin girl. Labour began on March 23rd, 1897, and had continued until I first saw her about 4.30 A.M. on the 24th. She was then at the end of the first stage, the os uteri being almost fully dilated. The pulse was fairly good; the heart and lungs were free from organic disease; but she was highly nervous, and exhausted from want of sleep and pain. Presentation was left occipito-anterior. No progress being made in an hour, I applied forceps, under chloroform, and with little difficulty delivered a very large child, though the pelvic diameters were somewhat smaller than normal. The cord was tied and divided; a hand was put over the uterus, which was rather flaccid, and the patient was allowed to come out of chloroform. There was very little hæmorrhage, and the patient's general condition was quite satisfactory. After a quarter of an hour the Credé method for expression of placenta was tried and repeated several times during three-quarters of an hour, but without success. Traction on the cord was made on one occasion, the left hand being on the fundus uteri at the time and for some time afterwards. The placenta was evidently firmly adherent. No inversion of the uterus had yet occurred, for the left hand felt the fundus uteri of its usual convex shape after traction on the cord had ceased. I now gave the patient more chloroform (the fundus uteri being still rounded and convex), intending to separate the placenta, but before I could get the right hand into the uterus the patient came partially out of chloroform and began to bear down, as though in the second stage of labour.

More chloroform was given, the bearing down efforts ceased, and I found the placenta presenting at the vulva, the amniotic surface outwards. It appeared spherical as though stretched over a soft fœtal head. Realising what had happened I sought the uterus with my left hand on the abdominal wall, but could not feel it; but on deeper pressure I felt distinctly, just above the symphysis pubis, the soft broad ring of the inverted uterus. But little hæmorrhage had occurred. Pulling down the uterus and placenta sufficiently to reach the upper edge of the latter, which was firmly attached to the fundus, about half of it anteriorly and half posteriorly, I carefully separated the placenta all round with the pulp of the fingers till it came off in one piece with the membranes attached. Great care was taken not to injure the uterine wall, but considerable hæmorrhage occurred. The uterus was now gently returned *en masse* into the vagina till slight resistance was felt, so as to correct the prolapse, which had been increased during the separation of the placenta, and also to utilise the vaginal pressure upon the uterus to check hæmorrhage.

The patient was now collapsed, with an ashy-grey colour, clammy skin, rapid, sighing respirations, and an uncountable, almost thready, pulse. The uterus, shaped like a large pear but markedly flattened antero-posteriorly, was lying in the vagina. At the point of inversion, about the cervix, a distinct groove could be felt in front and at the back, joined by short lateral grooves. Under more chloroform, and using counter pressure with the left hand through the abdominal wall, I attempted to reinvert the uterus by pressing upwards with the fingers the uterine portions of the grooves above mentioned. As moderate pressure produced no effect and greater pressure with the fingers might have lacerated the uterine walls, I closed my hand as if grasping an object and passed it dorsum forwards into the vagina behind the uterus so that the row of joints between the first and second rows of phalanges corresponded to the posterior groove above mentioned, the back of the hand being in contact with the posterior uterine wall. The broad, flattened dorsal surface of the first row of phalanges thus came into contact with the upper posterior aspect of the uterus close to the point where inversion stopped. Considerable steady pressure upwards and forwards upon the uterus could now be used without risk of laceration, and some degree of reinversion occurred posteriorly. This was repeated anteriorly, with the closed hand in front of the uterus, still dorsum forwards, the same row of joints being now in

[1] Transactions of the Obstetrical Society of London, vol. xlvi., p. 222.
[2] Ibid., vol. xxix., p. 98.

the anterior groove, but the dorsal surface of the second and third rows of phalanges being in contact with the upper part of the anterior wall of the uterus. Steady pressure upwards and backwards here produced a corresponding amount of reinversion anteriorly. In changing the hand from the posterior to the anterior aspect of the uterus, care was taken to keep up pressure on the fundus by any part of the hand or wrist which happened to be available for the purpose, in order to prevent a recurrence of the inversion which had already been corrected. This process was repeated once or twice till the fundus uteri was just a little below the anterior and posterior grooves; when under continued pressure upon the fundus uteri itself with the dorsal surface of the first row of phalanges, complete reinversion of the uterus occurred rather suddenly. While reinversion was being effected counter pressure with the left hand on the abdomen was applied. The time occupied in separating the placenta and effecting complete reinversion was about 20 minutes.

The patient's general condition was now attended to, strychnine hypodermically, brandy in large quantity, and a saline enema being given, and hot bottles used. On the fourth day there was a sharp attack of septic intoxication which subsided by the tenth day, and on the eleventh day an attack of hæmatemesis occurred. The patient then made an uninterrupted recovery, the anæmia gradually disappearing under the influence of iron. During convalescence the uterus was found to be deviated to the left.

This patient has since had several children without any complications occurring, showing that no permanent ill-effects were left by the accident.

The following points may be noted. 1. The patient was previously very much run down and anæmic. 2. She was a primipara. 3. The placenta was attached to the fundus uteri and was pathologically adherent. 4. The uterus did not contract very satisfactorily as long as the placenta remained attached. 5. The child was of large size. 6. The patient "bore down" considerably while partly under chloroform and while the uterus was relaxed.

It may be that traction upon the cord produces in such a case a temporary paresis of the uterine muscle at the placental site and for a short distance around it, and thus predisposes to inversion. This point, I think, has not been investigated.

The hæmorrhage in this case was quite insufficient to account for the extreme and prolonged collapse. Collapse is most marked when the accident happens suddenly, and seems to be due to strangulation of the inverted uterus, and to traction upon the Fallopian tubes, round ligaments, ovaries, and ovarian ligaments, with possibly slight laceration of peritoneum.

This accident is fortunately of very uncommon occurrence. It is supposed to happen once in about 30,000 cases. This is the only case I have seen in an obstetrical practice of considerably over 2000 cases. I have waited a long time before reporting this case, and as yet no similar train of circumstances has arisen in my experience. The notes of the case were taken when it occurred. The hæmatemesis was post-operative, and of this form of hæmatemesis I have only had one other case in obstetric practice.

Broadstairs, Kent.

CASE OF EXTENSIVE FIBRO-ANGIOMA TREATED BY RADIUM.

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A BOY, 8 months old, was admitted to hospital on Dec. 31st, 1910, for a large growth on the chest, which had been first noticed on August Bank Holiday. It had grown rapidly of late. Extending over the anterior portion of the chest from the clavicles to the diaphragm and from mid-axilla to mid-axilla, was a large raised area of the colour of raw beef-steak, which colour could only partially be removed by pressure; on the surface were minute telangiectases. On examination the skin was felt to be very markedly indurated and much thickened, and it felt as though the subcutaneous tissues were also affected; the margin was sharply defined and raised about half an inch above the surrounding skin. The whole mass was fixed and it was only possible to move it slightly on the chest wall.

There was considerable discussion as to whether it was a sarcoma or some unusual variety of angioma. A small portion was removed and sections cut.

Professor S. G. Shattock very kindly gave us an opinion on the sections and pronounced it to be a fibro-angioma. It

FIG. 1.

Patient before treatment.

FIG. 2.

Patient after treatment.

was treated at first by electrolysis and later by radium. It has now completely disappeared. There were also several small nodules on the body, all subcutaneous, and one does not know if they were of the same nature, but they have all disappeared without any treatment. Figs. 1 and 2 show the case before treatment and at the present time.

Nottingham.

A NEW FORM OF TUBERCULIN (T.F.)

SOME NOTES ON ITS DIAGNOSTIC AND THERAPEUTIC VALUE.

BY W. C. LYONS, M.B., CH.B. EDIN.,

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IN applying the various tests with old tuberculin for the diagnosis of tuberculosis one is struck by the comparatively large number of patients reacting positively in whom no trace of tuberculosis is found clinically, and who give no history of a tubercular infection.

In a series of 15 post-mortem examinations on patients who at times varying from one to two months before death gave a positive reaction, both with the vaccination and blister methods of applying old tuberculin for diagnosis, six were found to be tubercular subjects. Of these, three proved to have pulmonary tuberculosis, while one had lesions of tubercular peritonitis, the lungs being healthy. In one case a healed lesion was demonstrated at one apex, and in another caseous glands of the neck were found. In the remaining nine cases no obvious tubercular disease was discernible, special attention being directed to the bronchial, mediastinal, and mesenteric glands, lungs, and meninges.

One case which yielded a positive reaction with both the vaccine inoculation and blister tests was very instructive. A male, aged 46, was admitted suffering from pulmonary tuberculosis. The usual clinical symptoms were present, but tubercle bacilli were never demonstrated in the sputum on repeated examination. On examination the right lung presented a localised area of dulness, with moist sounds and a prolonged expiratory murmur. It was accordingly diagnosed as phthisical. The condition rapidly changed, and a few weeks later, on development of further signs, malignant disease of the lungs was suspected. At the necropsy this view was confirmed. The right lung and bronchial glands were found to be infiltrated with areas of carcinoma, and, further, no obvious trace of tuberculous disease was found.

In investigating this subject it was thought that old tuberculin might contain some substance which produced a positive reaction, perhaps by irritation, on apparently healthy individuals, whose skin is not sensitised by the products of the tubercle bacillus, and if that substance were removed a positive reaction would more definitely indicate the presence of tubercular disease.

On adding to 10 c.c. of old tuberculin 60 c.c. of absolute alcohol a cloudiness appears in the solution, which on standing for 24 hours settles as a precipitate which clings to the sides of the vessel. The supernatant liquid is again precipitated with absolute alcohol and filtered. The precipitate from both precipitations is dissolved in 10 c.c. of distilled water. This solution is again precipitated and filtered; the filtrate obtained from this is added to the first filtrate, and the whole evaporated to its original bulk (10 c.c.) at a temperature of 56° C.

The combined precipitates are dissolved in 10 c.c. of distilled water. The resulting solution contains the same amount of precipitate as the original 10 c.c. of old tuberculin. The solution of the precipitate is diluted with distilled water to form a 10 per cent. solution. If now 1 minim of this 10 per cent. solution of the precipitate is injected under the horny layer of the skin in three or four hours a small, raised, inflammatory area about half an inch in diameter appears around the site of injection in about 92 per cent. of all cases, both tubercular and apparently healthy individuals. This reaction, therefore, proves of no particular value in diagnosis.

The filtrate which has been evaporated to its original bulk is now taken and diluted with distilled water to form a 10 per cent. solution. If 1 minim of this solution be injected under the horny layer of the skin, a raised inflammatory area appears round the site of injection in from 12 to 18 hours in known tuberculous individuals; no positive reaction has been noted in persons apparently free from tuberculous disease, such individuals being likewise free, according to their clinical histories, from any suspicion of tubercular affections.

In applying the 10 per cent. solution of the filtrate for diagnostic purposes the procedure is as follows. A small area of the skin of the forearm is cleaned with soap spirit and rendered tense, as one does when vaccinating; the point of a hypodermic needle is then inserted obliquely between the horny and Malpighian layers, the aperture of the needle being turned towards the surface. One minim of the solution is then injected; a control of distilled water is injected in the same way. On withdrawing the needle some of the injected fluid escapes and is removed on a piece of cotton-wool. No dressing is required.

A positive reaction is seen to be as follows. Around the site of injection a raised area of inflammation and induration appears in from 12 to 18 hours. The inflammatory area in early cases of tuberculosis is usually nearly an inch in diameter, the edges gradually fading to normal skin. The area of induration is noted in the immediate vicinity of the needle prick. In more advanced cases the inflammatory area is smaller, usually about half an inch in diameter, the edges being more sharply defined. In these, too, the area of induration is well defined round the needle prick. In still more advanced cases the area of inflammation and induration is less well defined but recognisable, while in very advanced cases a reaction, if at all present, is only very slight. In early cases the reaction persists for three or four days, while in advanced cases it passes off in from 24 to 48 hours.

The test as described has up to the present been applied to 270 persons. Of these 191 were known to be suffering from tuberculous disease in various forms. Of these 191 tubercular cases the reaction was positive in 186; the 5 tubercular cases yielding a completely negative reaction were in the last stages of pulmonary tuberculosis and died within two weeks of the date of application of the test. In the remaining 79 negative cases no reaction whatever was noted, and in these great care was taken to exclude the possibility of a tuberculous infection past or present.

The reaction given by the filtrate has up to the present been found to have great value in assisting in the diagnosis of medical and surgical cases of tuberculosis, and especially so in cases of incipient phthisis otherwise in doubt.

Therapeutics.—A number of patients have been treated with the filtrate (for convenience termed T.F.), and so far the results have been very encouraging. The initial dose found to be most convenient is 0·001 c.c. This is increased every other day by from 0·0002 c.c. to 0·001 c.c. according to the reaction produced. It is easily borne and does not produce the untoward results so frequently given by other forms of tuberculin. The reactions by the patients are, as a rule, slight. There may be two hours after injection a slight rise of temperature, seldom more than 0·6° F., and this usually becomes normal in ten hours. In some cases for about two or three hours a slight headache or feeling of malaise or pain near the site of injection is complained of, and this usually completely disappears in a few hours.

The remedy seems to have a beneficial effect on the temperature, which in about one-third of the cases treated was swinging and "hectic," became normal in a week, and remained so during the course of treatment. As a rule, over the site of the injection there appears a small swelling which passes off within 24 hours.

It has been customary to select the supraspinous fossa as the seat of injection. The skin is first painted with tinct. iodi, and the injection made deep into the muscle with a platinum needle. Alternate shoulders are chosen to receive the injection every other day. Thirty cases of pulmonary tuberculosis have up to the present been treated with T.F. for two months and all have benefited thereby, as evidenced by the fall of temperature, increase in weight, disappearance or diminishing of the moist sounds in the chest, and lessening or disappearance of the cough, as well as a feeling of well-being expressed by the patients.

A typical case selected from the 30 cases treated is as follows. A male, aged 14 years. Admitted Sept. 9th, 1912, suffering from pulmonary tuberculosis. The usual symptoms, cough, loss of weight, and night sweats, were complained of. On examination well-marked signs were discovered in the right upper and middle lobes, and some moist sounds and prolonged expiration in the left apex. Weight 5st. 10lb., temperature swinging from 97·2° to 100° F., with several reverses. Treatment was commenced on Sept. 12th; within a week the temperature became normal and remained so ever since. Patient was given increasing doses of T.F. every other day. On Oct. 30th all the moist sounds in the chest had disappeared. Weight 6st. 10lb. Cough has quite disappeared and there are now no night sweats.

Union Hospital, Bradford.

AN INTERESTING CASE OF ARRESTED TUBERCULOSIS (?)

BY CHARLES GAYFORD, M.D. DURH., M.R.C.S. ENG., L.R.C.P. LOND.

THE patient, aged 51, actively engaged in his professional work, who has been under observation for fully 20 years, went for a holiday in August, 1911. With his family he spent a month at a select and well-known resort on the East Coast. During this time he contracted what he called a severe cold, and he came home again with its effects increasingly troublesome, and consulted me. He had at that time an almost constant cough, considerable expectoration, some fever, restlessness, night sweats, loss of weight, and loss of strength. Any ordinary effort was enough to throw him into a state of general free perspiration; even the act of undressing for the purpose of examination of his chest did this, for beads of sweat trickled off him while under this ordeal. His heart was found to be normal, as was the pulse, except that its frequency (96) indicated that something abnormal was at work. Examination of the urine revealed nothing abnormal in the renal organs. The lungs were also found to be perfectly normal except the upper portion of the right lung. From the level of the third rib in front to the apex, and again at the back from the level of the infraspinous fossa of the scapula upwards, there was evidently infiltration and a considerable consolidation of the lung. Scanty moist râles were present over this area, with bronchial breathing, which was most marked. Under treatment the cough disappeared, the expectoration ceased, the temperature became normal, the sweats passed off, and his strength returned. His weight also went up to his usual point. The sputum (at the time he was expectorating) was examined at the clinical department, St. Bartholomew's Hospital, and no tubercle bacilli were found. He continued his work, and through a trying cold and damp winter he suffered no relapse, though frequently exposed to all kinds of climatic conditions, some very adverse. But notwithstanding all this, the lung did not clear.

The history is as follows. At 10 years of age he is said to have been the subject of a severe attack of tuberculous peritonitis. His mother, who is hale at 88, told me that her son was so ill that no one expected he could live. The doctor in charge told her that nothing more could be done for him, and she must be prepared for the worst. He survived, and after a protracted convalescence he slowly recovered his health. Till 14 years of age he scarcely grew at all, but after that he shot up, and he now stands 5 ft. 10½ in. in height. As a boy he was dark in complexion, and therefore no one noticed whether he got darker and more bronzed after his illness than he was before. The presumption is that this was the case. To this point I shall return after the narration of his subsequent history is completed. From his fourteenth year onwards his health has been good. Except for colds, rheumatism, neuralgia, occasionally, on no occasion had he had to stay away from business. Five years ago he had a lump form in the left ischio rectal fossa, which came to a head and burst externally. But that did not entail sufficient suffering to induce him to tell me anything about it; though he came to see me from time to time about other minor ailments. This lump has hardened from time to time, then burst again and got easy, but never gave more than a passing inconvenience, and it was only quite incidentally that he mentioned (some three or four months after I had been treating him for his lung trouble) "this trouble below," which led to the discovery that he had fistula. Mr. C. B. Lockwood saw the patient with me in January last, and advised immediate operation. Owing to the pressure of business engagements that course was postponed till July, when Mr. Lockwood laid the sinuses bare and excised them. It was quite remarkable to notice how the condition of persistent lung infiltration responded to the paroxysmal hardening and tightening of the ischio-rectal lump, and again showed signs of clearing after a fresh discharge relieved the discomfort of the fistula. A suppository containing gr. iii. of potassium formate was ordered, and under the influence exerted by this means the sinus remained quiescent and did not fill again. But the condition of the lung persisted and Mr. Lockwood suggested that it might be desirable to get a vaccine made from the discharge from the sinus and try its effects upon the lung tissue involved. For this purpose Dr. F. W. Andrewes was consulted. But at the time there was no discharge obtainable even with an aspirating needle. Consequently we decided to have all the tissues, the sinuses, abscess sac, &c., removed at the operation sent on at once for pathological examination, and from them to prepare a vaccine for use if need be.

Dr. Andrewes's report upon the further examinations of the patient's sputum and the tuberculin test he carried out subsequently is as follows:

> The specimens of sputum supplied contained no tubercle bacilli, and appeared from its characters to be largely of pharyngeal origin. I carried out a von Pirquet's graduated test, using old tuberculin pure and diluted 4, 16, and 64 times with a control spot. The patient gave a moderate reaction with the pure tuberculin and that diluted fourfold; the reation was slightly more with 16-fold dilution, and very slight with the 64-fold dilution; with these the normal man scarcely reacted at all. The result of the test was thus somewhat equivocal, but I should consider it as pointing against any active tubercle at the present time. It is a reaction such as I should expect a man to give who had formerly had tubercle.

The date of this report is June 14th, 1912. On July 19th Mr. Lockwood operated, and the sinuses with such parts of the surrounding tissues as were removed was at once despatched in a sterilised bottle to Dr. Andrewes for examination. His report of this is given in his own words:—

> I have now microscopic sections through the piece of tissue removed. I can only find scar tissue. There is no evidence of any active tissue infection, and I cannot find any sign of tubercle.

The operation itself afforded evidence of a very suggestive character which pointedly illustrates the probable nature and mode of origin of the fistula. In shape it formed an irregular Y-shaped figure, and the two arms of the fistula which passed off at irregular angles from the main arm, which opened upon the surface, made their way to the wall of the rectum. On laying open the main arm the probe passed easily along each of the other arms and entered the rectum at different levels, the one just inside the internal sphincter, the other higher up. They were all excised and the openings into the bowel closed with stitches. The patient made an uninterrupted recovery. But the infiltrated segment of the right lung still persists.

There are two or three other points of interest. In the first place, sepsis was mentioned as a possible source of the lung mischief. The sufficient negation of that hypothesis lies in the fact that after complete removal of the fistula, which was the only obvious seat of septic poison, the infiltration of the lung tissue continued unaffected. Though while the fistula remained active the lung repeatedly responded to the paroxysmal exacerbations of the fistula, the infiltration remained undiminished and unaltered after its removal. Therefore another source of the mischief must be sought. Sir Dyce Duckworth, when consulted by me on this interesting case and before the fact of the presence of fistula was known to me, quoted the dictum, "Once tubercle always tubercle." And it is a question of great moment in this case as to whether or not the evidence it carries does not warrant the belief that this patient still carries about within him the seeds of tubercle, notwithstanding the fact that these sporadic forms of tuberculous activity aborted. For I certainly conclude that the attack of five years ago, which resulted in fistula, was of the nature of tuberculous ulceration in the rectum, and as certainly do I conclude that the attack of lung infiltration and invasion in the summer of 1911 was another active manifestation of tuberculous activity. In the original attack the retroperitoneal glands became the prison-houses in which myriads of tubercle bacilli were incarcerated and encysted. The general tissue resistance he then manifested shows that phagocytosis was in him so effective that all other tissues were cleared of tubercle. So complete has the maintenance of the investment of these imprisoned bacilli been that for fully 35 years none of them escaped. Five years ago a detachment of them did effect their escape, and they were responsible for the ulceration in the rectum and the consequent fistula. A year ago some others escaped and effected a lodgment in the apex of the right lung. But so vigorous has been the maintenance

of his tissue resistance, that his phagocytes have again been equally effective in arresting the progress of morbid processes, and his health is re-established.

I well recall the circumstances which attended the first and premature—because forced—declaration of the value of tuberculin in the treatment of tuberculosis. The illustrious investigator was compelled to disclose the nature of his remedy before he had had time to complete his researches. It was then taught that tubercle, instead of effecting an easy lodgment within the human subject, had a great struggle for existence in this host; and further, that the powers of tissue resistance in the human subject formed the great barrier which prevented the general prevalence of this disease. Since then Metchnikoff has carried out his investigations on phagocytes, and the results throw further light upon the provision which a healthy subject possesses for the defeat of morbific microbes. This patient presents us with a typical example of this power of resistance against the attacks of tubercle. His sputum, though often examined, contained no tubercle bacilli. But this in itself, though a perfectly satisfactory proof as to the effective blockade his phagocytes maintained against the escape of these microbes from his tissues into the lymph and blood streams, must not be regarded as negativing the actual existence of tubercular processes. In the sixth annual report of the Henry Phipps Tuberculosis Institute, Philadelphia, it is stated: "Sputum containing tubercle bacilli occurred in 2187 and was absent in 1253 out of the number examined, 3440." That is a large percentage of negative results, and this is a point that must be allowed its due weight.

One remaining point still requires our consideration. Above it has been noticed how deeply pigmented the skin of this patient is. Indeed, when he first stripped the thought in my mind was, Is this a case of Addison's disease? Deep pigmentation, almost bronzing of the skin, uniformly spread over the entire body, with loss of strength, loss of weight, and with but little in the way of physical signs in the lungs to account for it! His heart, however, showed no signs of weakness, his pulse was also such as to negative extreme low pressure. Then this pigmentation was not of recent date. "I was always so," the patient replied, when I put the question. And he had lived a strenuous life, and I at least knew this to be so since I first saw him 20 years before. Hence the suspicion as to Addison's disease died down. But in the light which recent investigations throw upon Addison's disease, was it quite justifiable to dismiss this suspicion so quickly? The suprarenal capsules, as has been long known, consist of two main divisions, the medullary and the cortical. Of these two the cortical portions are now known to exercise the greatest influence on the pigmentation of the skin. The medullary portion, on the other hand, excretes an internal secretion, if that is not a contradiction in terms, which exercises its influence over the gastric, the cardiac, and the arterial muscular elements. Dr. G. A. Gibson, in the address on Medicine at the Liverpool meeting of the British Medical Association, said:—

> We are now sufficiently conversant with the affection (Addison's disease) to know that if there be an alteration of the cortical portion alone there will be pigmentation only, with little or no change as regards the digestive, circulatory, or nervous systems. That, on the contrary, when the medullary portion alone is involved, there will be great reduction of arterial pressure, attended by loss of tonicity and contractility of the heart, the result of which is profound asthenia.[1]

In the light of these views I submit, therefore, that this patient is the subject of cortical defect of the suprarenal capsules. Such a sequel by no means unlikely followed upon his early attack of tuberculous peritonitis. The massing and matting together of numbers of the retroperitoneal glands during, and subsequent to, the attack of acute tubercular inflammation would be a most rational hypothesis. And that the cortical substances in his suprarenal capsules were involved at that time and have been since seems to me to be no less rational. To my mind, the continuation of this pigmentary condition bears witness to the continued presence of these enlarged glands and the defects in the suprarenals. And I further deduce that these form the site whence these morbific manifestations issue from time to time. It is a corollary which has, I venture to suggest, ample basis of support.

Strand, W.C.

[1] THE LANCET, July 27th, 1912, p. 212.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE OF A CASE OF INVERSION OF THE UTERUS.

BY GEORGE H. BUTLER, L.R.C.P. IREL., L.R.C.S. EDIN.

ON July 29th, 1912, I attended a women in her second labour. The patient, aged about 25 years, was of slight build and nervous temperament. Chloroform was given towards the end of the first stage, and on account of some delay in the second stage the forceps were applied, and delivery was effected quite easily. As there was delay in the expulsion of the placenta ergot was given, and steady pressure made over the uterus for about a quarter of an hour, but no traction on the cord was made. At this stage the patient suddenly complained of sharp pain in the abdomen, and the placenta was expelled from the vagina with a firm mass of tissue adhering to it, which on examination was found to be a completely inverted uterus with the placenta still attached. This was peeled off and the uterus was replaced in the vagina, and steady pressure with the hand made for about ten minutes, by which time the uterus was restored to its normal position. More ergot was then given and firm pressure applied to the uterus through the abdominal wall for about half an hour. The organ was then felt well contracted and in its normal situation. There was only moderate hæmorrhage and very little shock. For a few days there was a slight rise in temperature, but the patient made an excellent recovery, and a vaginal examination a month after showed everything quite normal.

In an extensive midwifery practice of over 30 years I have never before met with a case of inversion, and as it is stated in books to be very rare—once in about 180,000 cases—I am giving this brief history of the case, thinking it may be of some interest to my fellow general practitioners.

Wealdstone.

PROLAPSE OF FEMALE URETHRA IN A YOUNG CHILD.

BY F. A. L. HAMMOND, M.R.C.P. LOND.,
MAJOR, I.M.S.

THE following case of prolapse of the female urethra in a young child was treated in the Civil General Hospital, Maymyo.

The patient, a European girl, five years old, was found to be suffering from discharge from the genitalia. The sheets and underclothing were stained in patches with a dark sanious fluid. The child seemed to be in no discomfort and there was no pain or frequency in micturition. On examination a tumour the size and appearance of a damson was seen to be filling the cleft below the clitoris, occupying the whole space between the nymphæ. It was difficult to make out the nature of the swelling, as, although it was apparently painless, the child resisted any examination further than inspection.

Chloroform was given the following day—March 31st—and it was found that the urethra was prolapsed to the extent of five-eighths of an inch all round. It was dark purple in colour and almost in a sloughing condition. The prolapsed portion was cut away and catgut stitches inserted. There was an uninterrupted recovery and the patient remains well six months later.

During the operation it was noticed that the whole of the pelvic floor was loose and it is probable that the urethral prolapse was due to this cause. There is no doubt that laxity of the genitalia is very common amongst European women in the tropics (a counterpart to the hydrocele, varicocele, and dropped testes amongst the males) and it seems likely that European female children suffer in the same way at an early age, though this condition escapes notice as there are few opportunities of recognising it.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Fatal Acute Ulceration Limited to the Small Intestine.—Auricular Tachycardia.

A MEETING of this section was held on Nov. 26th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. SIDNEY P. PHILLIPS read notes of a case of Fatal Extensive Ulceration limited to the small intestine. The patient, a boy aged 11, had had three attacks of rheumatism but no other illness, and came of a healthy family. In January, 1912, he began to suffer with acute abdominal pain and incessant vomiting. Under treatment the vomiting stopped, but the pain in the abdomen continued, and he was admitted into St. Mary's Hospital on the fourteenth day of his illness; there was never diarrhœa or melæna, and only slight pyrexia; he was found to have a tumid and somewhat tender abdomen, but improved and left hospital early in February. After going home the abdominal pain occurred at times, and on May 15th became very severe, but there was no vomiting or diarrhœa. He was readmitted to hospital on May 18th in a collapsed condition, with very swelled, tender abdomen. Laparotomy was performed by Mr. V. Z. Cope; a thickened appendix was freed from adhesions and removed; the small intestine was observed to be intensely congested. He died on the next day. The necropsy showed all the internal organs to be quite normal, except the middle third of the small intestine, which was deeply congested on its external surface, and from which the mucous membrane was entirely denuded, and the submucous and muscular coats were also to a considerable extent destroyed by ulceration; there were also a few small "solitary" circular ulcers. There was some recent hæmorrhage into the mesentery. The large intestine was quite healthy. The cause of the illness was not discovered, but Dr. Phillips suggested it arose from some toxin taken as food, possibly from food frozen or otherwise preserved. The ulceration was exactly like that seen in the large intestine in some cases of ulcerative colitis, which probably arose from the same cause. Some toxins were known to produce selective effects on the large intestine—e.g., corrosive sublimate; and others on the small intestine—e.g., tartar emetic; and indeed the symptoms and post mortem appearances in this case were not unlike those in some cases of tartar emetic poisoning. The clinical symptoms were of interest. The tumid tender abdomen with attacks of pain gave the case in the early stage a resemblance to one of tubercular disease; in the final collapse stage there was much to simulate intestinal perforation with peritonitis. Dr. Phillips had not found any published record of a similar case.—Dr. FREDERICK LANGMEAD said that he had had an opportunity during the last few months of making a necropsy of a case very similar to that described by Dr. Phillips. It was that of a boy, aged 9, who when aged 6 developed scarlatinal nephritis. Three years after the nephritis had been first recognised he was admitted to hospital for uræmia, with which were associated marked ocular changes, convulsions, and coma which proved fatal. During the last week of life his abdomen became distended, and was evidently painful, but no local signs developed. He had diarrhœa with incontinence, but passed no blood. At the necropsy profound changes were found in the last 3 feet of small intestine. This was deeply congested, looking as though it had been strangulated, and was matted to neighbouring bowel by recent adhesions. When slit up a condition like that of acute amœbic dysentery was found. The bowel wall was thickened in places and thinned in others, whilst large, irregular, undermining ulcers were abundant, and in places coalesced, so that large areas of gut were denuded of mucous membrane, and in places only peritoneum remained. The case differed from that of Dr. Phillips in that a toxæmia, that of uræmia, was known to be present. Ulceration of the large bowel was recognised as a complication of uræmia, but not such a condition as in this case, limited to the small intestine.—Dr. ROBERT HUTCHISON asked if a bacteriological examination had been made.—Dr. H. D. MCCULLOCH asked if the heart valves were affected, and suggested the possibility of the influence of streptococci in its production. The condition described suggested an analogy to sprue.—The PRESIDENT said that the rarity of the condition was a point of interest. It reminded him of a statement of Sir William Gull, that the jejunum was that part of the intestine which was least prone to ulceration. He had been interested to hear whether the jejunum had been affected or not.—Dr. PHILLIPS, in reply, said that the heart valves were normal. There had been no bacteriological examination.

Dr. C. E. LEA read a paper on four cases of Auricular Tachycardia. Case 1, a male, aged 62, was admitted for dyspnœa, dropsy, and bronchitis on July 1st, 1912. The pulse was irregular and rapid on admission, but rapid improvement followed rest in bed and digitalis, and he was discharged on August 16th. This was his third admission to hospital within 18 months for similar complaints, improvement with similar treatment on each previous occasion being equally satisfactory. The key to the cause of his cardiac distress was furnished by a tracing gained on August 6th, 34 days after admission. On this date it was noted that his pulse was regular, at about 70, but also that occasionally the pulse seemed to stop for about three seconds, and then resume its usual rate. These periods of apparent stoppage could be elicited at will in this patient by his holding his breath. He was himself, however, unaware of any symptoms arising during these "stoppages." Tracings taken showed such apparent lapses to be due to brief paroxysms of auricular tachycardia, of frequency about 135 per minute, and lasting about five seconds. The weakness of the radial pulse on such occasions was due to the smaller and more rapid ventricular beats elicited by the auricular tachycardia, and also to the fact that many of the auricular beats were "blocked" at the *a.-v.* tissues, failing to elicit ventricular response. (Tracings showing these facts were shown.) The patient's general health at this time was excellent. These paroxysms were relatively infrequent, and he was discharged on August 16th. Dr. Lea came to the conclusion that the whole cause of his symptoms could probably be attributed to more frequent and, perhaps, more prolonged paroxysms of identical character; that rapid and irregular ventricular response would in this case follow, especially if the patient was not taking digitalis, which could check to some extent the ventricular response; and that the resultant stress in ventricular rhythm would be productive of his symptoms. All these conclusions were verified as a result of tracings gained from this patient on Nov. 20th, 1912. The patient had been out of hospital three months; during that time he had been up and about and had had no digitalis. His general condition now was bad. Œdema of legs, marked dyspnœa, and bronchitis were present, and the excessive jugular pulsation in the neck formed a striking feature. The right border of the heart extended 2½ inches to the right of the midsternal line. Tracings now showed that the heart was irregular and rapid, at a frequency of 132. The cause of this was frequent but brief paroxysms of identical auricular tachycardia, during which paroxysms most of the auricular beats elicited ventricular response, unlike what occurred when he was having digitalis. Only occasionally, and that for a brief period, was the normal sinus rhythm at frequency about 84, undisturbed by the paroxysms. This case exemplified the truth that disordered auricular activity could, even in a heart organically healthy (the patient's previous health had been excellent and no valvular disease or advanced arterio-sclerosis was present), induce all symptoms of cardiac muscle failure. He also showed the beneficial effect of digitalis in its action on *a.-v.* conductivity. Case 2 was one of auricular "flutter." It was that of a man, aged 57, a postman. He had always had excellent health up to seven months previous to his admission, on June 12th, 1912, when dyspnœa and dropsy were his chief symptoms. His pulse on admission was 135 and regular. Digitalis (June 12th–July 6th) slowed his pulse to 80. As it was also irregular the drug was stopped, and nine days after (July 15th) it was again 135. The general condition of the patient, however, was good. A tracing taken on this date showed the case to be one of auricular "flutter." The auricles were beating regularly at 260; the ventricles at 130 (2-1 *a.-v.* block). The

explanation of the irregular slowing previously induced by digitalis was forthcoming when this drug was again given (10 minims of the tincture were given three times daily from July 16th to the time of his discharge), for on July 20th the radial pulse was about 86. The auricular frequency of 260 was unaltered, but there was now a mixed 3–1, 4–1 *a.-v.* block, the variation in degree of block in successive cycles constituting the irregularity. Occasionally a 6–1 cycle was seen. This condition remained till his discharge. When seen for the last time on Nov. 2nd the patient had again his 2–1 block. Auricular rate 260, ventricular 130. (He had been having no digitalis.) His general condition, however, was fair. This case formed a contrast to Case 1, and suggested that regularity of ventricular rhythm at high frequency was of better prognostic value than irregularity, such as was always present in Case 1. Case 3 was that of a woman, aged 40, who had typical mitral stenosis as proved post mortem. She was in fair condition; the pulse was 90 and regular from the time of admission, Oct. 24th, 1911, to Dec. 15th. On the latter date certain mental excitement, due to her determination to leave hospital, apparently induced the abrupt and continuous auricular tachycardia, with a frequency of 168, which commenced on this date and persisted till her death five days later. The prostration, intense thirst, and general distress consequent on this rapid rhythm formed the striking clinical features of this case. It is probable that before the end the auricles passed gradually into fibrillation. Case 4 was that of a woman, aged 50, who suffered from acute lymphocythæmia, especially involving cervical groups of glands. She presented, for some days before her death, frequent paroxysms of auricular tachycardia with a frequency of 180–190. Associated symptoms, similar to Case 3, of intense thirst, prostration, and general distress were present. Digitalis, in this as in Case 3, had no apparent effect, either on auricular or *a.-v.* tissues. In many cases of auricular tachycardia, but not all, recognition of its presence and a careful adjustment of digitalis to the requirements of the case, afforded sure prospects of very satisfactory treatment. In many cases of auricular "flutter" this drug could induce, if given in a certain way, cessation of the flutter, and a final resumption, by the auricle, of its normal frequency.—Dr. A. M. GOSSAGE recounted a case of a man, aged 20, with aortic and mitral regurgitation, a pulse of 200 per minute, and heart failure. He had prescribed 5 minims of digitalis three times daily and advised rest in bed Next week the man was free from symptoms. The attack recurred, again with a pulse of 200, confirmed by a tracing. On this occasion strophanthus had a similar effect in three days. Later he had similar attacks, but recovered equally quickly without drugs.—Dr. ALEXANDER MORISON did not altogether accept the nomenclature, especially the term "auricular flutter," which he preferred to call auricular tachycardia. He related the case of a woman with aortic and mitral disease, in whom he had detected by the stethoscope an audible rhythm over the jugular vein, which he termed jugular embryocardia. This persisted for three months until the patient died. The recognition of auricular tachycardia by auscultation had not been recorded. He questioned whether the value of digitalis was always due to its action on the auriculo-ventricular bundle.—Dr. A. H. COOK narrated the case of a young lady who for four years had suffered from tachycardia, apparently due to low blood pressure. She was in an almost cataleptic state for three weeks after each monthly period. The blood pressure equalled 70 mm. of mercury. If she stood up the pulse, usually about 72, rose considerably higher, and she experienced difficulty in breathing. The only effect of digitalis had been to make her very sick. The condition apparently followed typhoid fever and shock from bereavement. The tachycardia synchronised with lowering of the blood pressure.—Dr. G. W. GOODHART asked for any suggestion as to how a message was sent from the ventricle to the auricle when it was time for the auricle to start work. An interesting point was that in auricular "flutter" the condition improved under digitalis, and yet the frequency remained. He understood that according to Mackenzie and Lewis digitalis induced partial heart-block, but he doubted whether it always acted in this way. He had recorded with Dr. A. F. Hertz a case where digitalis slowed the ventricle but not the auricle.—Dr. H. BATTY SHAW asked if attacks resembling asthma were at all prevalent in the condition.—The PRESIDENT said that many recent statements had been made about the action of digitalis in cardiac disease. In two of the cases recorded that afternoon improvement was said to have followed doses so small as 10 minims and 7 minims three times daily. He had been accustomed to believe that digitalis did no good in the condition in doses so small. He was in the habit of giving 1½ drachms in the 24 hours, prescribing it at four-hourly intervals. It was a new fact that minute doses of the drug could produce such good effects. Every one of the five functions of the heart enunciated by recent workers was said to be depressed by digitalis, and yet for many years physicians had been accustomed to use it with good results. Such different effects had been ascribed to it that the whole question of the action and value of the drug was very confused.—Dr. LEA replied.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Death Certification and Registration.

THE quarterly meeting of this association was held at the Medical Society's rooms, Chandos-street, W., on Nov. 26th, under the presidency of Dr. J. G. SOUTAR.

Mr. H. F. HAYES NEWINGTON made a statement concerning the progress made in connexion with the Mental Deficiency Bill in Parliament, and the unfortunate snatch division which will result in its further postponement. He paid a high tribute to the strenuous labours of Dr. J. B. Hyslop all through.

Dr. SIDNEY COUPLAND read a paper, entitled "Remarks on Death Certification and Registration," in order to call attention to the changes recently introduced at the General Register Office in the registration of deaths so as to obtain greater uniformity in tabulation and therefore greater accuracy in vital statistics. It opened with a brief notice of the various changes in nomenclature and classification adopted in the Registrar-General's Abstract of the Causes of Death, from 1838, when Dr. Farr drew up a List of Fatal Diseases, to the present time. Dr. Farr revised his list three years later, and again in 1856, this last being based on the lines laid down in a report by himself and Dr. Marc d'Espine, with the hope that it might form the basis of an international system. To this list Dr. Farr added in later reports supplementary tables of diseases of lesser prevalence, and also for some years an additional list on the lines of the Nomenclature of the Royal College of Physicians, first issued in 1869. When after 40 years Dr. Farr was succeeded by Dr. W. Ogle in the office of superintendent of statistics, the latter rearranged the list as far as possible on etiological rather than on pathological lines, whilst aiming at continuity of record. Dr. Ogle's list was retained for 20 years, and then from 1901 onwards a revised arrangement introduced by Dr. Tatham was in force, consisting mainly in the transference to the "general" list of certain affections hitherto placed amongst "local" diseases, with also some changes in the latter, notably the separation of the heading "General Paralysis of the Insane" from that of "Insanity." This list has now been replaced by the "International List," and the changes entailed are fully set forth in a valuable manual prepared by Dr. T. H. C. Stevenson, which also contains much useful information on certification. The list contains 189 distinctive headings, of which 65 are further subdivided, so that in all the total number of separate headings is 312, as against 193 in the previous list. The "Manual" should prove invaluable to institutions where mortality records are prepared in accordance with the tables published by the Registrar-General. A draft form of schedule based on this list for the purposes of the death returns from asylums was submitted. Attention was also called to the change in the wording of Form 21 of the Commissioners' rules, in which the wording of the notice of death was that occurring in the usual form of certificate issued to medical practitioners. The official distinction between a "primary" and a "secondary" cause of death was explained, and examples were given of the interpretation of the former where death followed after a long series of morbid events. The importance of record of secondary or contributory causes was insisted on, if correct knowledge of disease incidence

was to be obtained. Reference was then made to the use of the term "insanity" as a primary cause, and the fact noted that in spite of the detachment since 1901 of "general paralysis" the number of deaths from this cause was still inexplicably large, and tended to increase, whilst those in asylums attributed to "exhaustion" from mania or melancholia were dwindling as more care was taken to ascertain some definite condition to which the death might be assigned. It was held that although apart from general paralysis any form of insanity could but rarely be considered as primarily responsible for the fatal issue, yet in a sense it might often be regarded as a contributory cause, in view of the exceptional mortality of the insane, indicative of physical feebleness and vulnerability. The paper concluded with a brief reference to the subject of comparative statistics of mortality amongst the inmates of institutions for the insane and the rest of the community. Much of the excessive mortality in asylums was no doubt to be ascribed to the physical enfeeblement of patients on their admission, whose mental condition often bore direct relation to their mental disorder. Thus it was found that for every 100 cases admitted to care 18 died within two years of residence, out of a total of 36 deaths in the space of 20 years. The specially high death-rates amongst the insane from nervous diseases (owing mainly to general paralysis and epilepsy) and phthisis were contrasted with that from cancer, which was but slightly above the general rate, and as a cause of death it was much less frequent than in the general community. The need for circumspection in statistical comparison between two such unequal groups of persons as those within and outside asylums was emphasised, it being held that any conclusions drawn from such comparison should rather point the way to further inquiry than be regarded as embodying ultimate truths.

The PRESIDENT said that Dr. Coupland had given cogent reasons for the proposed change—namely, returning deaths under the two headings primary and secondary. He believed that, in spite of the old forms and their instructions, many had already made their returns on that basis. One requirement was that the particular form of brain disease from which a patient suffered should be stated; but he believed it was usual to return simply the form of mental disorder with which he was afflicted, there being a natural hesitation to go beyond that.

Dr. C. A MERCIER contended that no two people agreed as to what was meant by a cause. He had reason recently to discuss that point with Professor Karl Pearson in a magazine Professor Pearson denying that there was such a thing as a cause or an effect in anything. He (Dr. Mercier) did, however, agree that there were such things as cause and effect, or, possibly, simultaneous happenings. But he took considerable objection to the words in the schedule submitted—namely, "primary and secondary" and "principal and contributory." As Dr. Coupland pointed out, "primary and secondary" were intended for use in point of importance, not in point of time. But there arose the inevitable question, Primary and secondary in importance in what respect? Taking the case of a man dying from ruptured aneurysm of the aorta, was the aneurysm the principal cause and the rupture the contributory? Or was the rupture the principal cause of death, and the aneurysm contributory? Again, the aneurysm was due to syphilitic involvement of the walls of the aorta; therefore, was the syphilis the primary cause, or was it only the contributory cause? Here were three factors: the syphilis, the aneurysm, and the rupture. Which was primary, which secondary? And what was the third? He had thought of suggesting the terms "remote" and "immediate," but they also would bring in their own special difficulties. Further, in deciding the importance of a cause one had to ask oneself, in what respect? Was it from a pathological, an etiological, or what point of view? Every antecedent could be regarded as a cause, for a cause was any condition in the absence of which the thing would not have occurred. Put in an extreme way, the cause of a man's death was his having been born. Often the principal cause attributed was the cause in which the observer was interested, so that the personal equation in filling up these forms loomed very large.

Dr. T. H. C. STEVENSON (General Register Office) said the idea in bringing up the subject was that there was at present no guidance as to what was meant by "primary" and "secondary," and while some practitioners understood the terms in the sense of importance, others conceived them to mean in point of time. In elucidating what were the causes of death in the mass there must be tables which had the quality of comparability. Some asylums returned the form of mental disease from which patients suffered, while others did not, and in the latter case, even if the cause of the death were appendicitis, it would be classified under "insanity."

Mr. J. F. BRISCOE considered that if a patient had malignant disease, that should be stated as the primary cause. His view was that the bulk of general practitioners compiled their forms in a scientific manner, and recognised the relative importance of the causes. Still, from a meeting of the British Medical Association he was able to say many members of the profession did not understand the matter.

Dr. BEDFORD PIERCE said there was a real difficulty in regard to the return when one did not know the cause of death. The likelihood of an inquest being ordered if no cause were put down was a cause of some hazard being made, and that tended to falsify the statistics.

Dr. ROBERT JONES remarked on the difficulty in such large institutions as Claybury, where the clinical and pathological sides were so distinct and so far removed from each other.

Dr. C. HUBERT BOND (Commissioner in Lunacy) said the paper had reinforced the opinion he had long held, that it would be lamentable if the scheme of the causes of death, their mode of certification, registration, and tabulation, adopted either by the Commissioners or by this association, were to show any marked deviation from those in use at the time by the Registrar-General, because it was clear that the value of the figures in relation to the insane would be largely rendered nugatory were the figures not comparable with those in relation with the general population. The necessity of a change of scheme was obvious. Nearly all asylums published their figures in the form given in the association's tables, arranged in groups in the manner followed by the schedule issued by the Commissioners, which in turn agreed with that used at Somerset House. If the new scheme came to be adopted he took it that it would be necessary to revert to the terms "primary" and "secondary," in place of the present "principal" and "contributory," which latter, however, could be retained in brackets after the new words. He heartily endorsed the remarks of Dr. Mercier and Dr. Jones as to the difficulty of relegating a cause to a secondary position, and as to the part played by the personal factor in the certifier. But he particularly wished to raise the question whether those terms were of any real use at all. In many cases it passed the wit of a medical man to be able to say which was the principal cause of death, no matter how cleverly classifications were framed. Scientific accuracy would best be served by the abolition of any attempt to separate causes.

Dr. M. ABDY COLLINS spoke in strong support of the contentions of Dr. Bond, as he felt that while the terms "primary" and "secondary" were retained there would be difficulties. The real primary causes of death were but few, and the sooner that was realised for the purposes of statistics the better.

The discussion was continued by Dr. MENZIES, Dr. G. D. MCRAE, and Dr. W. R. DAWSON, and Dr. COUPLAND replied.

LIVERPOOL MEDICAL INSTITUTION.

Suppression of Convulsion in Eclampsia.—Early Symptoms of Mediastinal Tumours.—Technique of Ether Administration.

A MEETING of this society was held on Nov. 21st, Mr. ROBERT JONES, the President, being in the chair.

Dr. ARTHUR J. WALLACE read a paper on the Suppression of the Convulsion in Eclampsia, which appears in full on p. 1574 of the present issue of THE LANCET.—Dr. H. LEITH MURRAY, in discussing the paper, spoke of the frequency with which cerebral hæmorrhage was found to be the cause of death. He did not think harm could be done by the injection of magnesium sulphate solution, as it would be a simple matter if there was any embarrassment of respiration to wash out the spinal canal with an isotonic solution.

Dr. J. LLOYD ROBERTS read a short paper on the Early Symptoms of Mediastinal Tumours. He had treated recently 36 cases. The symptoms were due to the pressure on adjacent

structures. Dr. Roberts especially drew attention to the symptoms of venous obstruction, and more particularly to pressure on the large azygos vein. When that vessel was pressed on, as in a case of mediastino-pericarditis, there was general anasarca of the body with effusion into the peritoneum and pleural cavity, but with no abnormality of the urine. The heart in these cases was normal, the beat slow and regular, no murmur, the symptoms being due to pressure on the superior vena cava and right auricle. When the azygos vein was pressed on in the upper part of its course there was serous effusion, mostly in the abdominal walls, loins, and lower limbs, and no proportional peritoneal effusion. In most cases the effusion was bilateral, but in some cases unilateral, when the pressure could be located to the region below the ninth dorsal vertebra, where the veins of the two sides joined. Respiratory obstruction was a frequent early symptom which might be found alone or more usually with venous obstruction; as had been pointed out by Dr. T. R. Glynn, there was in these cases marked alteration in vocal fremitus. Dyspnœa on exertion was a usual symptom, but was seen, especially in cases of gummata, out of proportion to the size of the growth. Pressure on nerves gave rise to early symptoms; pressure on the intercostals gave pain in the back and sides, and was mistaken for pleuritic pain. Pressure on the phrenic in some cases had given rise to pain in the shoulder through the communication with the superior acromial nerve. Pressure on the sympathetic gave rise to unequal pupils. Pressure on the vagus gave laryngeal paralysis and alterations in pulse rate, and in occasional cases to dysphagia, vomiting or hiccough.—Dr. GLYNN congratulated Dr. Lloyd Roberts and spoke of the value of the alterations in vocal fremitis in diagnosing these tumours. Dr. Glynn had found involvement of the spinal cord not infrequent in mediastinal tumours and in one case paraplegia had been the first sign of a growth.—Dr. JOHN HAY alluded to the infrequency of general symptoms and cachexia in malignant disease of the root of the lung.—Dr. W. PERMEWAN said that among the earliest symptoms he had noted a paralysis of the vocal cords on one side only, which did not cause any alteration of the voice. He thought that paralysis of the cords was more frequently seen in aneurysm cases than in cases of malignant growth. A left-sided paralysis with no obvious cause was in 90 per cent. of cases due to aneurysm. Malignant disease of the œsophagus frequently gave rise to paralysis on both sides of the larynx as an early symptom.—Dr. O. T. WILLIAMS alluded to a case where a tumour which had given rise to pain and a shadow in X ray photograph had disappeared under treatment but had recurred with a fatal result within three years.—Dr. R. J. M. BUCHANAN said that effusion into the pleura never gave the same complete absence of fremitus that an obstructed bronchus gave. He had found an ineffective and irritative cough often an early symptom.—Dr. W. B. WARRINGTON and Dr. E. T. DAVIES also spoke.—Dr. LLOYD ROBERTS replied.

Mr. FRANCIS W. BAILEY opened a discussion on the Technique of Ether Administration. The first part of his remarks was devoted to the history of the use of ether. He then showed a variety of apparatus that had been used from an early inhaler of Snow to Kelly's intratracheal insufflation apparatus and Roux's apparatus for intravenous injection of ether. Mr. Bailey detailed the preparation of the patient and discussed the use of atropine, morphia, &c. He thought they were of use in moderate doses and given half to three-quarters of an hour before the anæsthetic. He used a Skinner's mask covered with stockingette, a drop bottle, a ring pad round the mouth, and several layers of gauze to cover the mask. The patient was asked to breathe quietly by the mouth. As little movement as possible should be made once the anæsthesia was begun. There should be good colour and even respiration throughout, the airways should always be kept patent, the jaw could be kept forward by a finger behind the angle, and the lips open in edentulous people by a thumb in the mouth. It took six minutes to anæsthetise the average patient, using 1½ to 2 oz. of ether; 8 to 10 oz. were required for an operation lasting an hour. Patients did best with an 8 per cent. vapour. Mr. Bailey described the technique of intratracheal insufflation and of the intravenous method.—In the discussion which followed Mr. R. E. KELLY described the experiment of Henderson, of Connecticut, who had in the laboratory reproduced all the errors of unskilful administration of anæsthetics, and so had demonstrated the causes of fatalities which were ascribed to status lymphaticus, enlarged thymus gland, &c. Respiratory failure was the commoner of the two, cardiac failure accounting for the lesser proportion of cases. The real cause of the failure of respiration was deep breathing and intermittent anæsthesia; the normal stimulus to the respiratory centre being the presence of carbonic acid in the blood of the centre, with overdeep breathing the carbonic acid was not present in sufficient quantity to keep the centre active. Cardiac failure was due to prolongation of the struggling stage or to pain during the intermittence of administration. Mr. Kelly advised that anæsthetics should not be mixed and that no operation should be done under partial anæsthesia. In respiratory failure artificial respiration should be performed, and in cardiac failure massage of the heart. He had used intratracheal insufflation in 70 cases, and was quite satisfied with its action. Ether pneumonia was not due to the ether, but to septic saliva being present in the bronchi.—Mr. W. THELWALL THOMAS laid it down as a primary rule that anæsthetics should not be mixed. He had seen as many as 17 cases die from chloroform and considered ether much the safest general anæsthetic. He had been brought to this opinion by the superior results obtained in America in cases of septic peritonitis. Their cases did equally well when ether was the anæsthetic used. Ether should be administered without any closed bag by the open method, as Mr. Bailey had described. Atropine certainly diminished the secretions, but he did not think it was of great advantage. He rather thought cases of parotitis might be due to the arrested secretion. He thought the intratracheal method had a field of usefulness in cases where respiratory movements interfered with the operation, as in difficult gall-bladder cases and in mediastinal and tracheal work.—Mr. BAILEY shortly replied.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—Meetings of this society were held on Nov. 7th and 21st, Dr. Stanley Riseley, the President, being in the chair.—Dr. Harold Leader, in a paper on Pneumococcal Infections, confined his remarks to cases occurring in early life. Some of the difficulties experienced in the differential diagnosis between fibrinous and broncho-pneumonia were considered. A brief review of the complications of pneumonia were given, special attention being paid to pericarditis, it being stated that this condition was commoner than was generally supposed, but that it was seldom diagnosed. Mention was made of other organs in the body occasionally infected by the pneumococcus, either primarily or secondarily. Sections from a case of broncho-pneumonia with empyema and pericarditis were on view, showing pneumococci in the lung, spleen, and kidney.—Dr. A. E. Naish read a paper on the Diagnosis of Intrathoracic Tubercle in Childhood. He quoted figures to show the great discrepancy between post-mortem and general death statistics, as to the actual number of deaths from tuberculosis, the proportion of intrathoracic to abdominal tubercle, and the age distribution. He concluded that a large number of young children must die annually from pulmonary tubercle in whom the cause of death had not been determined, and that these deaths occurred mainly under the age of 5. The diagnosis frequently presented great difficulty, but in view of the fact that pulmonary tuberculosis was a frequent result of a primary infection of the mediastinal glands the greatest attention should be bestowed on the physical signs and symptoms of the latter. The value of various physical signs was discussed.—Mr. W. S. Kerr showed a man with Tonsillar Calculi, who had also a swelling in the region of the right submaxillary gland with typical signs of salivary calculus.—Mr. Alan C. Turner showed two infants with Enlargement of the Spleen and Liver. One had marked leucocytosis with other signs of acute myelogenetic leukæmia. The other case was obscure, with no leucocytosis or marked blood changes. In both the Wassermann reaction was negative.—Dr. Arthur J. Hall, in a paper on Remedies, Ancient and Modern, expressed the opinion that some old-fashioned methods of treatment, as by leeches, linseed poultices, blisters, &c., might be more frequently used with advantage. He advocated the necessity of giving large doses of sodium salicylate in acute rheumatism, and referred to the use of "regulin" in selected cases of chronic constipation.—Mr. W. W. King showed the following specimens: (1) Torsion of the Pedicle of a Cystic Teratoma of the Ovary in a patient

whose symptoms strongly resembled those of a ruptured ectopic gestation; and (2) Malignant Papilloma of the Ovary with Secondary Deposits in the Omentum. The growth appeared to arise in a cystadenoma, but the great degeneration of the tumour made an exact diagnosis impossible.

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Devon and Exeter Hospital on Nov. 15th.—Dr. C. J. Vlieland, the Vice-President, having been elected to the chair *pro tem.*, Dr. R. V. Solly, the President, read a paper entitled "Some Cases of Pyrexia," which appears in full on p. 1571 of this issue.—In the discussion which followed Dr. Henry Davy called for the opinion of the meeting on the exact significance of the Widal reaction and mentioned a case where the clinical symptoms were positive of enteric fever, but the Widal negative.—Dr. W. Gordon considered the Widal reaction to be a great help, but many cases could be diagnosed without this test. The late appearance of diagnostic symptoms as well as the late reaction to clinical methods proved a frequent barrier to an exact diagnosis, and he cited the following diseases as likely to cause confusion—ulcerative endocarditis, tuberculosis, typhoid, paratyphoid, influenza, and malignant growth with ulceration and formation of abscess.—Mr. C. E. W. Bell noted that the President had only mentioned one case of pyrexia occurring with intestinal worms. In his experience this had been by no means an uncommon occurrence amongst surgical cases in the children's wards.—Mr. J. Pearson related cases from Dr. Davy's wards in the Exeter Hospital where helminthiasis had been associated with pyrexia of 102°–103° F.—Dr. Vlieland discussed the question of coli cystitis and its treatment by vaccines, illustrating his remarks by a case recently under his care.—Dr. G. P. D. Hawker referred to the cases of pyrexia coupled with a condition of acetonæmia in young children. In his experience these had responded rapidly to alkalies and a brisk purge.—Dr. Frank A. Roper, in alluding to the value of the Widal test, considered that much depended upon the reliability of the strain of bacillus used in the test. Certain strains were capable of reacting positively with normal serum. Turning to cases of malignant endocarditis, he did not consider that sufficient clinical evidence could be adduced in any case to justify the use of the word cure. He also mentioned Russeau's methylene blue test and the diazo reaction, and his own personal experience supported the value of the latter in the diagnosis of typhoid fever.—Mr. R. A. Worthington discussed the treatment of cystitis due to bacillus coli and gave it as his experience that cases under 35 responded well to treatment; those ranging from 35–50 did less well, whilst the cases aged 50 and upwards were never really cured. He should like to see cases after 50 cured by vaccines.—The President replied.

Reviews and Notices of Books.

A Practical Medical Dictionary of Words used in Medicine with their Derivation and Pronunciation. By THOMAS LATHROP STEDMAN, A.M., M.D., Editor of the "Twentieth Century Practice of Medicine," Editor of the *Medical Record*. Illustrated. London: Henry Frowde and Hodder and Stoughton. Pp. 1000. Price 21*s.* net.

Dr. Stedman's scholarly qualities are well known to the medical profession throughout the United States and elsewhere. Although it would seem, therefore, that of medical dictionaries there are quite enough already in the field, the appearance of one from his pen must bespeak careful consideration. The functions of the lexicographer are twofold: first, to provide the medical reader with a ready work of reference in which he shall be able to find an explanation of any term he may encounter in medical literature, together with information concerning its proper pronunciation and origin, to the end that its accurate significance and its correlation with other words may be fully grasped and impressed upon the memory; and, secondly, to form a guide in the selection of those words most desirable for perpetuation out of the mass of words that in increasing numbers are recklessly brought forth to struggle for existence. To these functions some of us would add a third: the duty of doing his utmost to assist in banishing from the medical vocabulary such words as are altogether objectionable on philological grounds, or unnecessary as only adding fresh terms for things already adequately named, thus multiplying the difficulties and confusion of the reader. On this point Dr. Stedman says in his preface: "It is not the function of the lexicographer to deny the right of citizenship to every word that is not constructed on strict etymological lines, and it would do little good if he did; but he can indicate the correct terms and throw the weight of whatever authority may be accorded him on the right side. This I have endeavoured to do." With the first part of this statement we feel ourselves in accord; for the primary purpose of the dictionary is, as we have said, to enable the reader to understand the terms he is likely to meet with in his reading, and this it would woefully fail to accomplish if the names of all unworthy citizens were excluded from the list. We shall confine our observations, therefore, to an endeavour to ascertain how far Dr. Stedman has achieved success in his efforts to guide towards philological correctness.

We will begin with the bricks of which the verbal edifice is constructed—i.e., the spelling. Dr. Stedman tells us that "in the spelling of medical terms, preference has been given to the simpler forms. In the matter of the elimination of the diphthongs, æ and œ, it is a significant fact that the languages which are direct descendents of the Latin, especially the Italian and the Spanish, have dropped the a and the o, while the double vowels have been retained only by the Teutonic languages." In this he sees only a natural process for those who have used the words from the beginning, and holds that the daughters of the Latin race have a finer instinct than others for the genius of their parent tongue. He also points to the fact that even in English in very many words of classical derivation—e.g., "equal" and "economy"—the diphthongs have been replaced by simple letters, and asks why technical terms should not follow suit. In this contention (which is quite common in America, and doubtless has some advocates here) he entirely ignores the fundamental reason for the selection of the Greek and Latin vocabulary as the basis of scientific nomenclature. Because medical science is international, not national, its specific terms should be comprehensible at sight, not only by those of the nationality in whose tongue any given medical communication is couched, but by all foreign medical men also, however limited their knowledge of that tongue, who can read it at all. It is quite hard enough for most people to grasp the intricacies of a foreign language and to acquire an adequate vocabulary, even in regard to familiar words. When, therefore, a highly technical subject is being dealt with, surely it is only common sense to ease the international reader's burden by writing Greek- and Latin-derived terms, selected for the technical vocabulary because of their more or less international character, in a shape as little altered as possible from their original form—denationalised, in fact—instead of reconstructing them out of recognition by adapting them to the genius of any national language. Any moderately educated Greek, or even Latin, scholar should be able to gather at first glance the meaning of anæmia, but "anæmia" might, for example, suggest to international readers "windiness," and in like manner "pediatrics" would appear to be a hybrid word signifying the therapeutics of the feet. To enumerate further examples of possible confusion is unnecessary—they are numerous.

The retention of the correct etymological spelling, therefore, is no mere question of pedantic classical sentiment; it

is an essential utilitarian condition of technical terms being not national, but international. Further, such "simplification" of technical terms is provocative of mispronunciation. The genius of English for the most part makes *c* and *g* hard before *a*, *o*, and *u*, and soft before *e*, *i*, and *y*. Many of our words framed in the past have transliterated the Greek κ by *c*, on the Latin plan; but it should be remembered that to the Latin *c* was always hard. Catalepsy and cone, cited by Dr. Stedman, are naturally pronounced hard, even in English, so that there the transliteration does not seriously matter. Leucocyte and many other words have slipped in in the past, with the regrettable but inevitable result that they are pronounced as though written leukosyte, &c., instead of leukokyte. Both the spelling and the pronunciation, however, in these cases are now definitely established and must be endured, but that is no justification for the continuous increase of such confusion in the case of new words, such as caryocinesis, frequently (and naturally) mispronounced karyosinesis, or cinematograph, constantly mispronounced *sinematograph*. Surely if an effort is to be made to purify our medical nomenclature—and few, we imagine, will question the desirability of so doing so far as it is practicable—while we may not "refuse citizenship" to verbal deformities that have made good their footing, we may, and indeed ought, to do our best to keep out all others for the future as undesirable aliens. As to Dr. Stedman's decision to give the Greek sources in Latin instead of Greek characters, we can only regret it, unconvinced by his guiding principle that it is rendered advisable by "the deplorable tendency to eliminate Greek from the curriculum of preparatory schools and colleges."

But besides giving the preference to what appears to us the wrong side in matters of orthography, Dr. Stedman in very many instances has failed to use his acknowledged acquaintance with Greek, both ancient and modern, to throw the weight of his authority on the right side. To take only the word cited by him in the preface. Ootheceotomy is not, as he asserts, preferable to oophorectomy, for the simple reason that it also violates the genius of the Greek language (as the exceptions to be found only in the comic poets purposely did—e.g., γλισχραντιλογεξεπίτριπτοι, Aristophanes) by including a preposition in a compound word between two nouns. In Greek composition a preposition can properly be preceded only by another preposition or other particular word, such as δυς or α (αν) privative. Both the words cited are philological monstrosities, though the latter being in current use can hardly, for reasons above stated, be denied the right of citizenship in a dictionary. Matters are not mended, nevertheless, by the introduction of another word, which if more accurate in its component parts also violates a principle of Greek word construction. Many words, equally objectionable in our opinion, can be found preferentially indicated in this Dictionary.

Linguistic dictionaries are usually bilingual, intended to help not only in the conversion of unfamiliar foreign terms into familiar native ones, but also to aid the converse process of converting native terms into foreign ones. Dr. Stedman has admirably in part followed this plan by, as it were, incorporating an English-Medical dictionary in a Medical-English one. For example, under certain kinds of descriptive words—e.g., abdomen, foot, hand, pain, phobia, uterus, and so forth—the author groups together the scientific terms for various conditions associated with the part, or limiting or modifying the root idea. Here, indeed, was a chance for the lexicographer to exercise his guiding influence by directing the use of only such terms as are unexceptionable. While a reader has all kinds of terms—good, bad, and indifferent—thrust upon him willy-nilly, and must find out what the writer intends to convey, he is free in giving expression to his own ideas to choose his words, and he will rightly wish to use only the most desirable words, and will look to the lexicographer to assist him in his choice. How does Dr. Stedman help him in this? To take only one instance. Under the word "heart" we read "*fatty degeneration*, adiposicardia, steatosis cordis, cardiomyoliposia, cardioliposia, cardiodemia, and cardioethmoliposia." Not one of these words except cardiomyoliposia is to be found in the Medical-English portion, and there it is given in the incorrect form, cardiomyoliposis—incorrect because the rule of Greek word formation is that compound abstract nouns take the terminal ια. An exception is made for words ending in ψις, σις, ξις, when the first word is a preposition. They then retain their usual termination—e.g., βάσις, ἀνάβασις. But where the first word is any other part of speech, they too change their termination to ια, thus from α privative and βάσις comes ἀβασία. The reason that nearly all our older terms are correctly formed, while so many of the modern ones are philological monstrosities, is that our older physicians were often scholars. Again, when preferentially indicating terms, why is steatosis (Greek) to be preferred to adiposis (Latin) for association with the Latin "cor"? We think that Dr. Stedman has missed his chance to throw the weight of his authority on the right side, and this is the greater pity because his scholarship is well known and could here have been used without limiting the utility of his work in its first, most obvious, and most general purpose.

We have criticised this aspect of the work at such length, because of the special claims made in the preface, and because we had confidently looked for better things from Dr. Stedman's scholarship. It is pleasant to turn to points on which we can heartily commend the work. First, as to fulness and accuracy, we have referred to the book constantly now for some months—the only test of a dictionary—on every possible occasion, and not once has it failed to give enlightenment on the word we were seeking. We can commend also the useful introduction of a new feature in the inclusion of life insurance terms, and of those peculiar to homœopathy and the so-called eclectic medicine of America, because in these days the literature of no school or sect can wisely be entirely overlooked. Brief biographical notes are introduced of persons whose names have been given to parts of the body, to instruments, diseases, and so forth, and we welcome the inclusion of such eponymous terms in their regular alphabetical order. The chemical and therapeutical information concerning the mineral springs of America and Europe is also serviceable. The chemical, botanical, and electrical terms seem well represented, as also do the terms sanctioned by the Basle Anatomical Convention, while the pharmaceutical preparations of the British Pharmacopœia are added to those of the U.S. Pharmacopœia and the (American) National Formulary, thus meeting the needs of English practitioners and students. The book is well printed and remarkably free from printer's errors, and is excellently got up in every way, although in our opinion the popular "thumb index" is an impediment, rather than a help, to rapid reference.

As a help to the reader of medical literature the work is an admirable and accurate guide; as an influence towards the establishment of a higher standard for our medical nomenclature, and towards the dissemination of at least an international technical vocabulary for medicine, we are disappointed.

Die Ulnaris-Lähmung: Monographische Studie als Beitrag zur Klinik der Peripherischen Nerven-Erkrankungen. Von Dr. KURT SINGER in Berlin. Berlin: S. Karger. 1912. Pp. 130. Price 4 marks.

THE author has written a book of 130 pages on paralysis of the ulnar nerve. It serves to illustrate the manifold variety of morbid conditions giving rise to that paralysis, and also

the variation in degree of severity of ulnar symptoms. The book represents a vast amount of clinical research; at the same time, there is considerable repetition, and the similarity of the details in many of the clinical descriptions renders them rather wearisome. There is an excellent section on so-called "Narkoselähmung," a condition apt to occur more particularly during operations on the breast, where the corresponding arm is elevated and abducted to an undue extent. In spite of the elaborateness and exhaustiveness with which the subject is presented, we miss any adequate account of the relation of cervical rib to symptoms in the distribution of the ulnar nerve. One or two cases are referred to incidentally, but in the chapter on diagnosis and differential diagnosis there is no mention of that condition, although it is very common, in this country at least. Further, some of the cases diagnosed by the author as occupation neuritis may possibly have had this developmental anomaly as the underlying basis, but there is no mention of radiographic examination. Six and a half pages of bibliography complete the monograph.

A Manual of Surgical Treatment. By Sir W. WATSON CHEYNE, Bart., C.B., D.Sc., LL.D., F.R.C.S. Eng., F.R.S., and F. F. BURGHARD, M.S. Lond., F.R.C.S. Eng. New edition, revised with the assistance of T. P. LEGG, M.S. Lond., F.R.C.S. Eng., and ARTHUR EDMUNDS, M.S. Lond., F.R.C.S. Eng. In five volumes. Vol. I. London, New York, Bombay, and Calcutta: Longmans, Green, and Co. 1912. Pp. 552. Price 21*s.* net.

THE first edition of this work appeared 13 years ago, and during that time many important changes have taken place in the surgical treatment of disease, and the authors have found it necessary to revise, and in great part to rewrite, the work, in which arduous task they have received much assistance from Mr. T. P. Legg and Mr. Arthur Edmunds. The work is eminently practical, and a mere glance at its pages is sufficient to prove to the reader that it has been written by those who are thoroughly acquainted with the subjects with which they deal. This volume includes the treatment of general surgical diseases, including inflammation, suppuration, ulceration and gangrene, wounds and their complications, infective diseases, tumours and deformities. There is also an appendix in which the subject of anæsthetics is dealt with by Dr. J. F. W. Silk, and the examination of the blood in surgical conditions is described by Dr. d'Este Emery. In this last chapter there is a very useful summary of the condition of the blood in some of the surgical diseases in which it may afford some assistance in diagnosis. The Wassermann test is also clearly explained.

We have no criticisms to offer on the work as a whole. It is what it claims to be, a work describing the modern surgical treatment of the affections with which it deals. Though the first edition was good, we think that this is better.

Aids to the Treatment of Diseases of Children. By JOHN MCCAW, M.D. Irel. Fourth edition. London: Baillière, Tindall and Cox. 1912. Pp. 431. Price, paper, 3*s.* 6*d.* net; cloth, 4*s.* net.

THIS book has now reached its fourth edition, and its popularity is well deserved. It has the rare merit of being a compendium without being dull, and it is, in fact, more interesting than many much larger text-books.

The author is to be congratulated upon the manner in which the book has been brought up to date. Controversial points are impartially considered, and the latest work upon the more important points of pædiatrics is included in the new matter. This is the more welcome in a book of such limited dimensions as the present one. Some new subjects have been introduced, chiefly in the section devoted to nervous diseases—namely, mental deficiency and cerebral diplegia. The appendix contains short descriptions for making whey, beef-juice, and other varieties of food for infants or sick children, as well as directions for the carrying out of such treatment as mustard baths, sponging, &c., the details of which are frequently omitted even in larger text-books. The whole is completed by some useful prescriptions for children of one year of age and upwards.

The book is thoroughly to be recommended not only for students, but also for practitioners, to many of whom the excellent accounts of modern treatment will be very valuable.

A Manual of Diseases of the Nasopharynx, with Especial Reference to the Part Played by Them in Diseases of the Ear and the Treatment of these Conditions. By CHARLES A. ADAIR DIGHTON, M.B., F.R.C.S. Edin., Honorary Assistant to the Eye and Ear Infirmary, Myrtle-street, Liverpool, &c. London: Baillière, Tindall and Cox. 1912. Pp. 168. Price 10*s.* 6*d.* net.

THE author informs us in his preface that "with the introduction of the nasopharyngoscope by Dr. Holmes, of Boston, a new world has been opened up in aural surgery, and this fact has impelled him to write a book on diseases of this cavity. He recapitulates what is known of the development and anatomy of the nasopharynx; describes the usual methods for examination of the ear, nose, nasopharynx, and pharynx; deals with adenoids, the causation of Eustachian disease, catarrh of the nasopharynx, and catarrhal conditions of the Eustachian tubes; and considers the Eustachian tubes in relation to suppuration in the middle ear and tumours of the nasopharynx. Incidentally he describes a "splint" which he has devised for compelling the patient with acute suppurative otitis media to lie always on the affected side with a view of draining the tympanum and giving the corresponding Eustachian tube rest for recovery. The information is carefully selected and put together.

LIBRARY TABLE.

The Science of Hygiene: A Text-book of Laboratory Practice for Public Health Students. By WALTER C. C. PAKES, D.P.H. Camb., F.I.C. New edition, revised by A. T. NANKIVELL, M.D. (State Medicine), B.S. Lond., D.P.H. Camb. London: Methuen and Co., Limited. 1912. Pp. 164. Price 5*s.* net.—The laboratory practice here set out is confined to chemical analysis and microscopical examination. Water, foods, wines, beers, spirits, air, soil, which, of course, form only part of the general scheme of hygienic study, are the subjects of the chapters. There is a short section on meat inspection, but physics and bacteriology and vital statistics have been excluded as being "better treated in other and necessarily larger books," while "much of these sciences could hardly be considered as laboratory work." The scope of the work is thus definitely narrowed and its sphere of usefulness limited. The present requirements of students seem to us to indicate that the practical bacteriological and physical questions arising in hygienic considerations are no less important than the mere chemical analysis of food, air, and water. Besides, it is obvious that equally the chemistry and analysis of foods and so forth can be found adequately treated in special works upon the subject which have no direct reference to hygienic study. However, there is often an advantage in keeping the student within the limits of a special course, and this object is gained by this book. As far as we have examined the processes described they are suitable and convenient for the purpose. We cannot quite follow the statement on p. 91: "Brandy being made from

grapes the acidity is returned in terms of tartaric acid." Surely tartaric acid is a fixed acid, and is not expelled from the wine with the brandy on distillation. The chapter on disinfectants forms a very scanty treatment of the subject, and would lead the student into difficulties when he came to examine the commercial emulsions on the market by the directions given for the examination of phenol.

The Physiology of the Central Nervous System and Special Senses. By N. J. VAZIFDAR, L.M. & S. Second edition, thoroughly revised and enlarged. Bombay: Ramchandra Govind. Pp. 143. Price Rs.3, or 4s.—In this compilation, notwithstanding that about half a page of errata is printed separately and numerous corrections in ink are made in the text, there remain still a large number of printers' and other errors unattended to. We are told, for instance, that connective tissue contains "keratin." Hæmorrhage appears as "hœmorrhage" in many places, "papillœ" for papillæ, and so forth. The sizes of microscopic objects are omitted. There are also many mistakes in proper names, while we are told that "the endorgans concerned in the sensation of pain have not been definitely known." The fovea centralis "is composed almost entirely of the rods and cones." The book may be of some use to Indian students, but we doubt if it will meet the requirements of students in our universities.

1. *Deutsche Heil- und Pflegeanstalten für Psychischkranke in Wort und Bild.* Vol. II. Redigiert von Dr. JOHANNES BRESLER. Halle a.S.: Carl Marhold. 1912. Pp. 462. Price 19 marks. 2. *Die Irrenpflege in Oesterreich in Wort und Bild.* Redigiert von Dr. HEINRICH SCHLOSS. Halle a.S.: Carl Marhold. 1912. Pp. 360. Price 15 marks. — The first of these works constitutes the second volume of a book of which Vol. I. was reviewed in THE LANCET of July 22nd, 1911. It contains full accounts of various institutions for the insane in Germany written by their medical officers. It is profusely illustrated and contains also the ground plans of many of the establishments. The villa system appears to be widely developed and to be regarded with the utmost satisfaction, while provision for open-air and hydrotherapeutic treatment of the insane is almost everywhere made. The book should be especially interesting for architects and others concerned with the building of new asylums or with the improvement of old ones. The second book, like the first, is a result of the proceedings of the Fourth International Congress on the Care of the Insane, held at Berlin in 1910, and is on precisely the same lines as the book already noticed. It contains illustrated accounts of some 40 establishments, public and private, in Austria. Both books give a very good idea of the excellence of the provision made for the treatment of the insane in the two countries.

Electrical Injuries. By CHARLES A. LAUFFER, A.M., M.D. New York: John Wiley and Sons. 1912. Pp. 77. Price 2s. net.—This is a very useful little volume intended for practical electrical men. The author is the medical director of the Relief Department of the Westinghouse Electric and Manufacturing Company of Pittsburg, and he has written this book in simple language, so that any intelligent workman may easily learn the proper means to be adopted in emergency and until more skilled assistance can be obtained. Very clear and careful directions are given for getting the victim out of contact with the conductor that has injured him; carelessness in doing this may easily make another victim of the would-be rescuer. The prone pressure method of artificial respiration is very plainly described and illustrated, and it appears to be the method that is the most efficient and most easily learnt by the average individual. It is the author's opinion that in electric shock it is seldom necessary to keep up artificial respiration for more than half an hour, but it should be remembered that in cases of drowning it is not justifiable to stop for two or three hours unless there is clear evidence of the heart having stopped. Some very good directions are given for dealing with the various degrees of burns and wounds. The latter part of the book treats of the subject of infection and also of the effects of occupation upon health. It is really a common-sense dissertation on the conditions of life imposed upon us by modern civilisation, showing how unfavourable influences may be warded off by a moderate amount of ordinary care and forethought. If this volume were in the hands of every intelligent workman it is conceivable that much good would result to the community as a whole.

Modern Urinology: a System of Urine Analysis and Diagnosis. By CLIFFORD MITCHELL, A.B., M.D., Professor of Chemistry, Clinical Urinology and Renal Diseases, Hahnemann Medical College, Chicago, Ill. Illustrated. Philadelphia: Boericke and Tafel. 1912. Pp. 627. Price 83. net.—The urine is as a rule not sufficiently examined; when modern methods are employed great light may be thrown on many obscure conditions by examination of the urine. This work contains a very full account of the best methods of examining urine, both qualitatively and quantitatively. The physical examination of the urine is included, and the microscopic examination also. Tests are given for such abnormal constituents of the urine as alkaloids, coal-tar products, and metals. A useful chapter is that dealing with the analysis of the urine as a method of diagnosis, not only in diseases of the kidneys, but also in diseases of other organs and of the general system as well. The book should enjoy a great measure of popularity.

JOURNALS.

The Journal of Laryngology, Rhinology, and Otology.—The November issue opens with an editorial on the Education of the Specialist in Throat, Nose, and Ear Diseases. Indebtedness is expressed to *confrères* abroad, "who have taken so much trouble to compile authoritative contributions for the instruction of our readers," but the article concludes with a table which is intended to show the number of beds devoted to ear, nose, and throat cases, and also the number of the staff in British oto-laryngological clinics. The table is incomplete. The names of all the special hospitals in London for diseases of the ear, nose, and throat are not given, and the number of beds is understated. Further, the members of the staff are mentioned in some cases and not in others. This latter omission is also noticeable in connexion with the provincial clinics. Perhaps, however, the table may be an incentive to readers of the journal to emulate their foreign *confrères* and send in further information. In addition to the epitome of current literature relating to the specialty, the issue contains a translation of a paper by Dr. G. de Parrel on Mineral Water and Climatic Cures in Oto-Rhino-Laryngology. Speaking generally, the specialist is not acquainted with hydrology and when he is asked unexpectedly whether X—— les Bains is indicated in any particular case he may often be without the information which this article is intended to supply.

PRESENTATION TO A MEDICAL MAN.—On Nov. 23rd, at the annual distribution of certificates to the members of the Great Western Railway Employees' Ambulance Class for Bristol, Mr. John T. Wallace, M.B., B.Ch., B.A.O. Irel., was presented with a case for the carriage of concentrated drugs as a mark of esteem and appreciation for his services as honorary lecturer.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, NOV. 26TH.

Home Rule and Medical Education and Registration.

ON the motion of Dr. NORMAN MOORE, the President's memorandum in regard to the Government of Ireland Bill was received and entered on the minutes. After a detailed review of the General Medical Council's duties in regard to medical education and registration, the establishment of reciprocal relations as to medical practice, its disciplinary powers and duties, the memorandum concludes with this observation:—

From the foregoing it will appear that the Medical Council, as it has been established and augmented under Acts of the Imperial Parliament, is an organisation whose functions are not and cannot be limited to England, Scotland, or Ireland separately, or even to the United Kingdom as a whole. These functions have necessarily and beneficially been extended to other parts of the Empire and to foreign countries. It is accordingly submitted that legislation dealing with the Council's constitution and duties, and with the powers which it exercises subject to the review and direction of the Privy Council, is a matter of Imperial concern and should be reserved to the Imperial Parliament.

The National Insurance Act.

It was agreed, on the motion of Dr. NORMAN MOORE, to receive and enter in the minutes a report by the National Insurance Act Committee in regard to representations sent to the National Health Insurance Joint Committee as to: (1) the possible effect of the Act on the education of students in midwifery; and (2) the draft regulations for the administration of medical benefit.

The report contained a memorandum which is dated Sept. 19th, 1912, and which after approval was supplied to the Privy Council for transmission to the Insurance Commissioners. It contained the following passages:—

The General Medical Council, at its meeting on June 4th, 1912, appointed a committee "to consider the possible effects of the National Insurance Act on medical education and examination in relation to the efficient practice of medicine, surgery, and midwifery, to make representations thereon to the authorities concerned, and to report from time to time to the Council."

The committee, on June 18th, 1912, submitted to the Insurance Commissioners a memorandum dealing with the administration of maternity benefit in its relation to maternity hospitals and institutions concerned with the training of pupils in midwifery. The Commissioners have promised to give serious consideration to the suggestions of the memorandum when they come to deal with the subject of maternity benefit. The committee understand that they will have an opportunity of offering observations on the Commissioners' proposals before they are finally adopted.

On Sept. 12th the Lord President of the Privy Council transmitted to the Council copies of the Commissioners' Draft Regulations for the administration of medical benefit. ..... The committee have limited their consideration to details in the draft which either concern the special functions of the Council, or have a direct bearing on "efficient practice" in relation to persons entitled to medical benefit. They recognise that the system of administration established by the Regulations will have far-reaching effects on the conditions of professional training and professional practice throughout the country. It will be the duty of the Council to take note of these effects, and to direct the Lord President's attention to such of them as it may think to require consideration in the interest of medical education, of professional discipline, or of the public health. In the meantime the committee are not authorised to express on behalf of the Council any general opinion on the effect of the Regulations as a whole.

A letter received in reply from the National Insurance Commissioners intimated that with the exception of suggested provision for institutional treatment the Commissioners thought it would be found that all points of substance raised in the memorandum had been met by the regulations as issued.

Medical Men and Midwives' Emergency Notes.

A report was received from the Executive Committee in regard to correspondence between a certified midwife, Mr. J. T. Hurst, M.B., and the Central Midwives Board in regard to a circular sent by the Chesterfield Division of the British Medical Association to every midwife practising in the borough of Chesterfield. The committee recommended to the General Council to transmit to the Privy Council an expression of its strong disapproval of Clause 2 of the "conditions affecting the practice of midwifery in the borough of Chesterfield" contained in the circular which has been forwarded. The clause reads as follows:—

2. Doctors will not attend emergency notes from midwives requiring medical help unless the patient has previously retained a doctor in case his services are required.

Dr. NORMAN MOORE moved that the recommendation of the Executive Committee should be adopted.

Sir F. CHAMPNEYS said that he had little to add to the correspondence before the committee. He felt very much for the general practitioners who had to attend these midwifery cases without remuneration. But the omission really lay in the original Act, and it was not the fault of the Central Midwives Board that a provision for payment in these cases was not inserted. Instead of including a clause for the payment of practitioners nothing was done. This was not an isolated instance. The Central Midwives Board had before it the report of a case where a woman was in a state of grave emergency, and nine medical men were applied to and none of them would come. That ought not to occur. He thought that the resolution was the correct one on this occasion.

The PRESIDENT observed that in regard to the working of the Midwives Act it had been the consistent policy of the Council to suggest amendments in the Act. Rules were made under the Act to secure in all cases of emergency or danger to mother and child that the midwife should not take the sole responsibility of dealing with the case, but should call in a registered medical practitioner. The Council had more than once called the attention of the authorities to the fact that no provision was made for the remuneration of the medical man. It was not the fault of the Council that no provision had been made. He pointed out that under the maternity benefit of the Insurance Act there was a provision for obtaining payment for the medical man called in in these circumstances.

Dr. NORMAN MOORE said that it would be unfair if it went out that the circular in question emanated from the British Medical Association. It came from a particular division of the Association.

Dr. LATIMER thought that the question of the payment of medical men called in in cases of emergency by midwives should be brought forcibly before the proper authorities.

Mr. VERRALL regretted that representations as to payment had not been made with success. The failure of practitioners to get payment had been provocative.

The PRESIDENT said that under the Insurance Act the maternity benefit was available for the payment of the practitioner. Representations to that effect had met with success.

Dr. J. A. MACDONALD: That is only for a limited class—the wives of insured persons.

Dr. NORMAN MOORE remarked that it was most important that the public should not be allowed to think that any injustice would justify members of the medical profession adopting an attitude of refusal to attend grave cases.

The motion was agreed to.

Restorations to the Register.

After the Council had sat *in camerâ* the PRESIDENT announced that the Registrar had been directed to restore to the Medical Register the name of David Thomas Jones and to the Dentists Register the name of Thomas Wafer Byrne.

WEDNESDAY, NOV. 27TH.

The Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

Penal Cases.

The Council took up the consideration of penal cases.

The first was the consideration (adjourned from Friday, June 7th, 1912) of the case of Darabshaw Fardoonji Sanjana, formerly registered as of the Hampden Residential Club, Phœnix-street, London, N.W., but now as of Sanjan House, Lawrence-street, Kelty, Fife, L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S. Glasg. 1901. He had been summoned to appear before the Council on the following charge:—

That you have employed as your assistant in connexion with your professional practice a person—namely, D. Drysdale—not duly qualified or registered under the Medical Acts, and have knowingly allowed him on your behalf to attend and treat patients in respect of matters requiring professional discretion or skill, and to sign and issue on your behalf medical certificates in respect of such patients. In particular that you have: 1. Knowingly authorised or allowed the said D. Drysdale, at various times while in your employment at Kelty, Fife,

as your assistant, to attend and prescribe for patients and take fees for so doing in your surgery and at their own houses, and on a number of Saturday afternoons to finish your rounds, attend the surgery and take any fresh cases during your absence on such afternoons in Edinburgh. 2. Knowingly authorised or allowed the said D. Drysdale to attend and examine patients for you, and to sign for you medical certificates of various kinds—namely, (*a*) for sick allowance from the British Order of Ancient Free Gardeners, "Kelty Blossom" Lodge, for John Redmond (four), William Nicoll (four), Robert Williams (two), John Rankine, Robert Bunyan, George Turner, Andrew Fotheringham, James Beveridge, Arthur Morrow, Henry Hutchison, John King, and Archie McKay, and (*b*) in respect of Workmen's Compensation, for Alexander Ramage and John Coonie. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants were the British Medical Association. At the conclusion of the proceedings on June 7th, 1912, the following decision of the Council was announced by the President:—

Mr. Sanjana, I have to inform you that the Council have deliberated on your case, and have found that certain of the facts alleged against you in the notice of inquiry have been proved to their satisfaction, and in particular that you have: 1. Knowingly authorised or allowed D. Drysdale at various times while in your employment at Kelty, Fife, as your assistant, to attend patients, and on a number of Saturday afternoons to finish your rounds and attend the surgery during your absence on such afternoons in Edinburgh; and that you have (2) Knowingly authorised or allowed the said D. Drysdale to attend and examine certain patients for you, and to sign for you medical certificates of various kinds. The Council take a serious view of the particular facts thus found to be proved against you; but in order to give you an opportunity of showing that your professional conduct is henceforth to be without reproach, they have postponed judgment on the facts as found until the November session of the Council. At that session you will be required to attend, and you shall then produce evidence regarding your professional conduct, testified to by medical practitioners and other persons of position who may be acquainted with your practice and conduct in the interval.

Mr. SANJANA again attended and was accompanied by Mr. J. C. Macbeth, solicitor, Dunfermline.

Dr. ALFRED COX, the general secretary of the British Medical Association, represented that body.

Mr. MACBETH addressed the Council on behalf of Mr. Sanjana. He said that there were two other medical men resident in Kelty, and, rightly or wrongly, these gentlemen had not been on the best of terms with Mr. Sanjana or he with them. He (Mr. Macbeth) had accordingly not approached them with a view to obtaining from them evidence in regard to Mr. Sanjana's professional conduct. However, he had with him statutory declarations by Mr. James Terris, J.P., factor of the Blairadam estate near Kelty, Mr. Archibald Adam, J.P., Kelty, the Rev. A. S. Adamson, Kelty, and Mr. W. Adamson, M.P. for the Western Division of Fifeshire. These declarations testified to the esteem in which Mr. Sanjana was held in the locality by his patients and others and also to his professional conduct.

Mr. SANJANA went into the witness-box, and in answer to the legal assessor (Mr. Bodkin) he stated that he did not now know where Drysdale was. He had left him three months before the proceedings in June last. Since June last he had had a qualified assistant.

The PRESIDENT: The Council want to know from you whether it is your intention to have no other assistant.

Mr. SANJANA: Quite. It is my intention to have no other assistant.

Dr. COX then addressed the Council. He said that Mr. Sanjana had not produced the evidence which he was requested by the Council to produce. He had produced no evidence from medical men. The British Medical Association hoped that the Council would not consent to lay evidence being received on the question of a medical man's professional conduct being satisfactory. It was quite probable that some of the gentlemen who had signed the statutory declarations had not an accurate appreciation of the professional matters involved in the case. He would ask the Council to be very chary in accepting evidence of this kind.

The PRESIDENT: You have no evidence to the contrary from medical men.

Dr. COX: That is not my point.

The PRESIDENT announced the decision of the Council as follows: Mr. Sanjana, I have to inform you that the Council has not seen fit to direct the Registrar to erase your name from the Medical Register.

The Council proceeded to the consideration (adjourned from Friday, June 7th, 1912) of the case of John Jeeves, registered as of 163, Cemetery-road, Sheffield, Mem. R. Coll. Surg. Eng. 1889, Lic. R. Coll. Phys. Lond. 1889, who had been summoned to appear before the Council on the following charge:—

That you have on numerous occasions knowingly and wilfully assisted a certain person not registered as a dentist—namely, Leo Patrick Barry, of 402, London-road, Sheffield, in performing operations in dental surgery by administering anæsthetics on his behalf to persons coming to him for treatment, and particularly to one George Johnstone in February, 1912. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants were the British Dental Association. At the conclusion of the proceedings on June 7th, 1912, the following decision of the Council was announced by the President: "Mr. Jeeves, I have to inform you that the Council have found that the facts alleged against you have been proved to their satisfaction. The Council are of opinion that it is the duty of a registered medical practitioner to ascertain that an operator is a duly registered medical practitioner or dentist before administering anæsthetics for him. The Council take a very grave view of the action of practitioners who administer anæsthetics for unregistered persons. They have, however, postponed judgment on your case till the November session, when you will be required to produce evidence, satisfactory to the Council, as to your professional conduct in the interval."

Mr. Jeeves attended, and the British Dental Association were represented by Mr. R. W. Turner, counsel instructed by Messrs. Bowman and Curtis-Hayward, solicitors.

Mr. JEEVES read to the Council testimonials as to his professional character during the last six months from Dr. R. B. Greaves, Dr. E. B. Hazleton, and Mr. W. W. Banham, all medical practitioners in Sheffield.

After the Council had deliberated, the PRESIDENT said: Mr. Jeeves, I have to inform you that the Council has not seen fit to direct the Registrar to erase your name from the Medical Register.

The Council proceeded to the consideration (adjourned from June 5th, 1912) of the further report of the Dental Committee on the case of William John Watson, registered as of 8, New-street, Birmingham, in practice before July 22nd, 1878, who had been summoned to appear before the committee to answer the following charge:—

1. That, being a registered dentist, you, in the course of an inquiry held in May and November, 1908, into your professional conduct, gave the Council your undertaking not to advertise in future and to have no connexion, direct or indirect, with unqualified practitioners. 2. That you have, in breach of your undertaking not to advertise, done, or caused or permitted to be done on your behalf the following things, viz: (*a*) In February, 1912, the dropping of a card pamphlet advertising your practice and the artificial teeth supplied by you into the letter-box at the house of Mr. Frederick Edwin Gill, at 8, Lansdowne-road, Handsworth, Birmingham. (*b*) Towards the end of February, 1912, the dropping of another and different card advertising your practice into the letter-box of 16, Oxford-road, Erdington, Birmingham. (*c*) On 4th March, 1912, the handing of a card similar to the last mentioned to Mr. Sidney Wm. Bliss in your surgery in response to a request from him for one of your prospectuses for a friend. (*d*) On or about 18th April, 1912, the dropping of a card similar to those in (*b*) and (*c*) into the letter-box at the said house, 8, Lansdowne-road, Handsworth, Birmingham. 3. And that in relation thereto you have been guilty of infamous or disgraceful conduct in a professional respect.

At the conclusion of the proceedings on June 5th the following decision of the Council was announced by the President to counsel for the complainants, the British Dental Association:—Mr. Turner, I have to announce that the report of the Dental Committee has been referred back to it for further inquiry and report.

The case was further considered by the Dental Committee on Nov. 25th, 1912, and in a further report it stated that—

William John Watson did not attend, having intimated by letter to the solicitor, dated November 14, 1912, that he left himself unreservedly in the hands of the committee.

The said William John Watson had previously in correspondence with the Registrar submitted a revised form of small card which in the opinion of the committee is not open to objection, and he had intimated that he adhered to his undertaking not to advertise directly or indirectly in the future, and that the card would only be used when asked for by his patients in his consulting-room as hitherto.

The Council considered in private the further report.

The PRESIDENT said in announcing the decision: The Council does not see fit to direct the Registrar to erase from the Dentists Register the name of Mr. William John Watson.

The next business was the consideration of the report of the Dental Committee on the case of George William Thomas Arrowsmith, registered as of Whitstable, Kent, in practice before July 22nd, 1878, who had been summoned to appear before the committee on the following charge:—

That being a registered dentist you have permitted an unqualified person named F. J. Oaten to practise in your name or in partnership

with or as assistant to you as a dentist at Westcliff House, Oxford-street, Whitstable, and that you have thereby enabled him to practise as if he were qualified. And that in relation thereto you have been guilty of infamous or disgraceful conduct in a professional respect.

The Dental Committee in its report stated :—

The said George William Thomas Arrowsmith was registered in the Dentists Register on December 9, 1878, as "in practice before July 22, 1878," and his address in the Register for the current year is Whitstable, Kent. The facts charged against the said George William Thomas Arrowsmith were that, being a registered dentist, he had permitted an unqualified person, named F. J. Oaten, to practise in his name or in partnership with or as assistant to him as a dentist at Westcliff House, Oxford-street, Whitstable, and that he had thereby enabled him to practise as if he qualified. The committee find the facts proved as charged.

Mr. ARROWSMITH did not attend, nor was he represented.

The complainants were the British Dental Association.

The PRESIDENT, in announcing the decision of the Council, said : In the absence of Mr. Arrowsmith I have to state that, on the facts found in the report of the Dental Committee, it has been proved that George William Thomas Arrowsmith has been guilty of infamous or disgraceful conduct in a professional respect, and that the Registrar has been directed to erase from the Dentists Register the name of George William Thomas Arrowsmith.

The next case to be considered was that of Alfred Arthur Austin, registered as of 86, Sherlock-street, Birmingham, L.A.H. Dubl. 1887, L.R.C.S. Irel. 1887, who had been summoned to appear before the Council on the following charge :—

That being a registered medical practitioner you were on July 10th, 1912, convicted at the Birmingham Assizes of feloniously killing and slaying one Lena Kinmond, and sentenced to seven years' penal servitude.

Mr. Austin did not attend nor was he represented.

Mr. HARPER, the solicitor to the Council, handed in the evidence of the conviction.

The PRESIDENT said : I have to announce that the Council has come to the following decision :—That Alfred Arthur Austin having been proved to have been convicted of the felony alleged against him in the notice of inquiry, the Registrar has been directed to erase from the Medical Register the name of Alfred Arthur Austin.

The Council then considered the case of William Arnold Thomson, registered as of Castle Hill, Maidenhead, L., L.M., 1869, K.Q.C.P. Irel., L., 1869, F. 1874, R.C.S. Irel., who had been summoned to appear before the Council on the following charge :—

That being a registered medical practitioner you were on May 14th 1912, convicted at the Central Criminal Court of feloniously and unlawfully using an instrument with intent to procure miscarriage, and sentenced to three years' penal servitude.

Evidence of the conviction was submitted.

The PRESIDENT said : I have to announce that William Arnold Thomson having been proved to have been convicted of the felony alleged against him in the notice of inquiry, the Registrar has been directed to erase his name from the Medical Register.

The next case was that of George Bell Todd, registered as of 40, Lansdown-crescent, Glasgow, M.B., M.S. 1884, Univ. Glasg., who had been summoned to appear before the Council on the following charge :—

That being a registered medical practitioner you were on June 3, 1912, convicted in the High Court of Justiciary on four charges of procuring abortion (to which charges you pleaded guilty) and were sentenced to seven years' penal servitude.

Evidence of the conviction and the judge's observations in passing sentence were submitted.

The PRESIDENT said : I have to announce that George Bell Todd having been proved to have been convicted of the felony alleged against him in the notice of inquiry, the Registrar has been directed to erase from the Medical Registrar the name of George Bell Todd.

Report of the Public Health Committee.

The following report from the Public Health Committee was received :

The committee considered correspondence that had passed between Mr. J. E. Purvis, M.A., secretary of the State Medicine Syndicate of the University of Cambridge, the registrar of the General Medical Council, the chairman of the committee, and Dr. Norman Walker relative to an apparent discrepancy between the old and the new Regulations of the General Medical Council for the diploma of public health. The committee confirmed the action taken by the chairman in explaining to Mr. Purvis, through the registrar, that there was no discrepancy between the two issues of the Regulations. The committee expressed the hope that in all cases of doubt as to the meaning and bearing of the Regulations for the diploma in public health the licensing bodies would consult the committee.

Examinations for the Services.

A report was received from the Examination Committee on the returns as to the examinations for the Services received since the last session of the Council. It contained the following passages :—

In the case of candidates for vacancies in the medical staff of the Royal Navy two candidates out of 12 were rejected in both medicine and surgery. Of one of the successful candidates it is reported that his spelling was "bad" and in the case of another that it was "bad and illiterate." Both these successful candidates had passed the matriculation examination of the late Royal University of Ireland.

In the case of candidates for vacancies in the Army Medical Service two were rejected, both being deficient in surgery, while in the case of candidates for vacancies in the Indian Medical Service four were rejected, of whom one was deficient in pathology and bacteriology, two failed to obtain qualifying marks and were deficient in general knowledge, and one failed to obtain qualifying marks and was deficient in pathology and bacteriology and also in general knowledge.

All three candidates reported as deficient in general knowledge appear to be natives of India with British but unregistered qualifications. Two appear to have been registered as medical students, one in respect of the Allahabad Intermediate Arts Examination, supplemented by that of the Educational Institute of Scotland, and the other in respect of the Punjab Intermediate Arts Examination. The other practitioner does not appear to have been registered as a student in the United Kingdom, and therefore his preliminary examination cannot be traced.

Vacancies on Committees.

On the motion of Sir THOMAS FRASER, the following nominations from the Scottish Branch Council to fill up the vacancies on committees caused by the retiral of Sir David McVail were agreed to: Examination Committee, Dr. Norman Walker; Public Health Committee, Dr. McVail; National Insurance Act Committee, Dr. Cash.

The Council adjourned.

THURSDAY, NOV. 28TH.

The Council resumed its sitting at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

Penal Cases.

The Council considered the case of Charles Ernest Turner, registered as of 186, Camberwell-road, S.E., M.R.C.S., L.R.C.P., 1898, who had been summoned to appear before the Council on the following charge :—

That being a registered medical practitioner you were on Oct. 16, 1912, convicted at the Central Criminal Court of feloniously using an instrument with intent to procure miscarriage and were sentenced to six months' imprisonment with hard labour.

Mr. Turner was not present, but he was represented by Mr. Stammers, solicitor.

Evidence of the conviction was placed before the Council.

Mr. STAMMERS addressed the Council on behalf of the practitioner. He said that at the trial certain medical evidence was called which showed that the miscarriage was quite consistent with natural causes. He would make an application to the Council that the case should be adjourned until Mr. Turner's release, so that he might give evidence from the professional point of view of the case.

The PRESIDENT said : I have to announce that Charles Ernest Turner having been proved to have been guilty of the felony alleged against him in the notice of inquiry, the Registrar has been directed to erase his name from the Medical Register.

The Council considered a report of the Dental Committee on the case of Alfred James Futcher, registered as of 26, Pretoria-road, Southsea, in practice before July 22nd, 1878, who had been summoned to appear before the committee on the following charge :—

That, being a registered dentist, you were on Oct. 10th, 1912, convicted at the Portsmouth Quarter Sessions of the following misdemeanours, namely : (1) On May 5th, 1909, of obtaining from the North Borneo State Cigar Syndicate, Limited, 100 cigars with intent to defraud; (2) On May 28th, 1909, of obtaining from the North Borneo State Cigar Syndicate, Limited, 200 cigars with intent to defraud; (3) on Sept. 6th, 1911, of obtaining from Jacob Winter one buckle ring and one signet ring with intent to defraud, and were sentenced to nine months' imprisonment in the second division.

The report of the Dental Committee dealt with the conviction.

The PRESIDENT said : I have to announce that Alfred James Futcher having been proved to have been guilty of the divers misdemeanours alleged against him in the notice of inquiry, the Council has directed the Registrar to erase from the Dentists Register the name of Alfred James Futcher.

An Entry in the Medical Register.

The Council considered the circumstances in relation to the continued appearance in the Medical Register of the name of Richard Henry Barber, registered as of 69, Victoria-road, New Brighton, Cheshire, Scottish Triple qualification 1888. The person practising at that address had, it was stated in the agenda, received from the solicitor to the Council the following notice of an inquiry to be held at which he was invited to attend:—

On behalf of the General Medical Council I have to give you notice that on Thursday, Nov. 28th, 1912, at 2 P.M., the Council will hold an inquiry at 299, Oxford-street, London, W., for the purpose of ascertaining whether the person registered in the Medical Register with the name and particulars as follows:—Richard Henry Barber, 69, Victoria-road, New Brighton, Cheshire; 1883, November 1st, R.; Lic. R. Coll. Phys. Edin. 1888, Lic. R. Coll. Surg. Edin. 1888, Lic. Fac. Phys. Surg. Glasg. 1888—is deceased, and whether the said entry has been incorrectly made or fraudulently caused to be made in the said Register, and should be erased therefrom. This notice is sent to you as the person now or lately carrying on practice as a legally qualified medical practitioner in the name of Richard Henry Barber at 69, Victoria-road, New Brighton, aforesaid. I am instructed to add that you may attend the inquiry personally, or may be represented by a solicitor with or without counsel. Any communication or application which you may desire to make relating to the matter of inquiry should be addressed to the Registrar of the Council at 299, Oxford-street, London, W., without delay.

There was no appearance in reply to this notice.

The informants in this case were the Medical Defence Union, who were represented by Dr. Bateman.

The PRESIDENT said: There is no accused practitioner in this case, and the only question is as to the accuracy of the entry in the Medical Register under the name of Richard Henry Barber.

Dr. BATEMAN said that the Richard Henry Barber whose name appeared in the Medical Register qualified in Edinburgh in 1888, and after practising in Newcastle, Gateshead, and the neighbourhood went in 1890 to Oregon, in the United States of America. He took out a certificate authorising him to practise medicine in that State. He served with the American army in the Philippines, and afterwards returned to practice in Oregon. On Dec. 2nd, 1904, he received a call to visit a patient in an outlying district. He had to cross a river or creek. The weather was severe, and Dr. Barber, who was on horseback, lost his way. The next day his lifeless body was found in the river. The body was identified as his at the subsequent inquest by persons who had known him. No one in America seemed to have thought it necessary to give notice of the death of Dr. Barber to the Registrar of the General Medical Council, and the entry remained as of Portland, Oregon, U.S.A., until in 1907 a letter was received purporting to come from Dr. Richard Henry Barber requesting the alteration of the address from Portland, Oregon, to Liverpool. He asked that the entry in the Medical Register should be erased.

Mrs. J. BARBER, of Oregon, U.S.A., widow of Richard Henry Barber, went into the witness box and gave evidence in support of the application. She stated that she was a lady doctor. She arrived at Liverpool on Friday last, and on Monday she went to an office there and saw a man who purported to be Richard Henry Barber. She did not know him. She was the widow of Richard Henry Barber who was registered with the Edinburgh qualification in 1888. She was born in Scotland. She left this country with her husband for the United States in 1890, and he having obtained the necessary State qualification practised medicine in Oregon. He went through the war in the Philippines. He afterwards practised his profession again in Oregon, and he died in 1904 in the manner which had just been described to the Council. She produced his diploma granted by the Scottish Conjoint Board, his certificate qualifying him to practise in Oregon, and the papers relating to his service in the United States army.

The LEGAL ASSESSOR submitted to the witness applications to the Council for the continued registration of Richard Henry Barber.

Mrs. BARBER said that these were not signed by her late husband.

The PRESIDENT, after the Council had deliberated in private, said: Dr. Bateman, the Council has deliberated on the information you have laid before it, and it has come to the conclusion that it has been established that the person originally registered as Richard Henry Barber is deceased, and it has accordingly directed the removal from the Medical Register of the entry Richard Henry Barber. I am empowered by the Council to offer its thanks to you and to the Union which you represent for the trouble you have taken in obtaining the facts, and for the manner you have laid them before us, and also to Mrs. Barber for having come over in order to assist the ends of justice.

The Apothecaries' Hall, Dublin.

A report was received from the Examination Committee on the July and October examinations of the Apothecaries' Hall, Dublin.

Sir CHARLES BALL said that the reports of the assistant examiners in surgery dealing with the final examinations of the Apothecaries' Hall, Dublin, indicated that these examinations were satisfactory and sufficient. In respect to a question asked by the assistant examiners concerning their attendance at the examinations in practical pharmacy, medical jurisprudence, and hygiene, the committee was of opinion that, as these subjects were part of the final examination, they should be inspected and reported upon. In conclusion, Sir Charles Ball moved that the Council should adopt a recommendation of the committee to the effect—

That the assistant examiners be requested to report for the future upon the examinations in pharmacy and medical jurisprudence conducted by the Apothecaries Hall of Ireland.

The PRESIDENT said that he doubted whether this recommendation could be legally made. Section 5 (2) of the Medical Act laid down that the assistant examiners should be charged with the duty of seeing that a sufficient standard was maintained in "medicine, surgery, and midwifery." He doubted whether the subjects in the recommendation were embraced in the wording of the section.

Sir CHARLES BALL withdrew the recommendation.

Dr. ADYE-CURRAN moved:—

That the reports upon the Apothecaries' Hall, Dublin, be discontinued until such time as the Council may direct.

He thought that the expense of preparing and printing these documents was unnecessary.

Dr. LATIMER seconded.

Sir HENRY MORRIS asked whether the time had not now come when some change might be made in the regular inspection and report of these examinations.

Dr. MACKAY moved as an amendment that the matter should be referred to the Examination Committee.

Dr. NORMAN WALKER seconded the amendment.

After some discussion,

Dr. ADYE-CURRAN said that he would assent to his motion being sent to the Examination Committee for consideration.

This suggestion was then agreed to.

Students' Registration Committee.

A report was received from the Students' Registration Committee.

Interim Report of the Education Committee.

On the motion of Dr. MACKAY the following interim report was received from the Education Committee:—

The Committee report with reference to their proposals for raising the standard of the Preliminary Examination in general knowledge that they are at present engaged in conferring with Indian and Colonial examining bodies, that they now propose to consult the Government and university bodies of the United Kingdom, and that they intend to report to the Council on the whole subject at the session of May, 1913.

The Pharmacopœia Committee's Report.

The following report was received from the Pharmacopœia Committee:—

From June 1st to Nov. 23rd, 1912, the number of copies of the British Pharmacopœia (1898) sold by the publishers was 605. The total number of copies sold in the year ending Nov. 23rd was 1048, a number somewhat in excess of the annual average. Up to the present time 44,620 copies of the Pharmacopœia and 4520 copies of the Indian and Colonial Addendum have been sold. The stock of the Pharmacopœia now in hand numbers 384 copies; it may be necessary to print a small additional impression before the new Pharmacopœia is ready for publication.

Four important sections of the draft text of the new work have been prepared by the editors, and are in course of revision by the committee, with the assistance of the several committees of reference. It is hoped that these sections, and others, will be ready for the printers early in the new year, and that the correction of the proofs will thenceforward be rapidly proceeded with.

The committee recommend that Dr. Cash, now an additional member, be appointed an ordinary member of the committee in the place of Sir David McVail.

The recommendation to appoint Dr. Cash an ordinary member was agreed to.

Diagnosis, Treatment, and Research under the Insurance Act.

Sir CLIFFORD ALLBUTT moved:—

That the Insurance Act Committee be instructed to consider in the interests of medical education the means and arrangements under the Act for providing those aids to diagnosis, treatment, and research which modern pathology has made available, and be authorised to make representations to the authorities on these and any other matters arising out of the Act which come within the functions of the Council.

He said that it was only from the point of view of medical education that the Council could deal with this subject, and it might be wise for the committee to bring forward a report at the next meeting of the Council upon which it might decide whether or not it should take certain action. In the meantime matters were very urgent. It might be desirable in the interests of the medical profession that the committee should have some power in the interval, seeing that the Insurance Act would come into operation in a few weeks, to approach the authorities on the matters concerned, and perhaps also on some of the sentiments or opinions which might be expressed by the Council during its present sitting. He might be allowed to say, without any misunderstanding, that the country generally had entered upon the Insurance Act without realising as a country—individuals, no doubt, realised it—what a very big business was being taken in hand. At the end of last year he approached the Insurance Commissioners and pointed out what a very large, important, and costly undertaking the Act was if it were undertaken from the point of view of preventing or diminishing disease. He need not labour that point. It was only too well known. If shrewd clinical observation, aided by a battery of drugs, was to do any good under the Insurance Act in abolishing some of the great plagues which afflicted mankind, it would have to be supplemented. This would involve not merely the undertaking of a crusade against tuberculosis. There were many great subjects that would have to be taken up and dealt with on the same principle as the tuberculosis crusade. Other diseases, such as rheumatic fever and diphtheria, would have to be attacked in the same way. There must be a general movement all along the line against these plagues. That being so, how was it to be done? The schemes might fall into two classes. He was not going to give his personal views at this stage. He had urged very strongly that there should be some systematic development of clinical laboratories and the linking up of special departments of hospitals along certain lines. It was suggested to him about three months ago that next year a committee should be appointed by the Government to go into these questions very carefully and fully as to whether existing institutions or new institutions might be developed for the purpose of research, as well as giving assistance to medical men, and whether they should be linked up to afford easy powers of consultation with those who studied along special lines. If this committee were appointed, it seemed to him of the very greatest possible importance that the General Medical Council from the point of view of medical education should be in a position to deal with any such Government Committee. It was desirable that there should be some body which could speak on the kind of line the Council would probably take up towards medical education. The schemes of which he spoke might fall into two classes. On the one hand, there might be a central scheme and, on the other, a devolutionary or provincial scheme. The one proposal was to have a great central institute which might be the resort of all medical men—so far as he know, both of England and Scotland. There might be a large central bureau, perhaps in London or in Edinburgh or some large centre.

Sir C. NIXON: What about Ireland?

Sir CLIFFORD ALLBUTT: There are so many points of difference that I had better keep to England and Scotland. The other scheme was to develop the many institutions which already existed and were largely in universities and to some extent in other independent bodies, and to develop, for instance, laboratories in Aberdeen, Edinburgh, St. Andrews, Newcastle, Leeds, Oxford, Cambridge, and other great centres, pathological and clinical laboratories on scientific lines. It would be necessary to establish such institutions in important places where there was not a university college—say, in places like Norwich and Exeter. This was one way in which a large body, not merely of reports from medical men could be received, but where medical research work might be carried out in the most beneficial manner. He thought that that touched medical education. He would speak of England. If there was a large central institution in London it appeared to him that it would become a large manufactory of clinical reports, and it would be very efficient in its way, but it would tend to harden into a bureau diverted from research, and it might become an unprogressive institution. It would be entirely out of the reach of the practitioners of England as a means of education. That would be his attitude to the central scheme. If the development of local institutions were looked to the members of the Council would see what an enormous educational influence these might exert in the districts around them. There would be an honourable emulation between one institution and another. There would be the great stimulus of professors and other workers from the various universities and elsewhere meeting together in conference, like at the Pathological and Pharmacological Societies. There would be all this machinery for continuing the education of the medical man already in practice. In these days of motor cars medical men could easily run up to the centre. It appeared to him that from the point of view of the education of the actual practitioner, it was of the greatest importance that these local centres should be developed for the purpose of clinical assistance. If these places were to be instituted research must be carried on at the same time. That research would have a most inspiriting influence in the various districts besides benefiting young students. He thought that he had said sufficient to indicate good reasons why this further question should be committed to the existing Insurance Act Committee, and why some considerable powers should be given to that committee in case of urgency to meet the authorities on matters which appeared to him to be of vital interest to the medical profession.

Dr. LANGLEY BROWNE seconded. He thought that the Council was not only interested in the education of the medical man during the time he was getting on the Register, but also during the whole time of his professional life. There ought to be an easy means of verifying diagnoses. There were many cases occurring in practice in which a medical man would be very glad if he could apply at once and get help in his diagnoses. The means of using modern methods under the Insurance Act should be arranged, but he did not think that this should be an additional duty for everyone on the panel.

Sir THOMAS FRASER said that his recollection was that one of the conditions laid down by the Chancellor of the Exchequer was that the practitioner should employ all modern methods in his diagnosis and in the treatment he was expected to employ. That seemed to him to be imposing on the profession something which was quite impossible at the present stage. The institution of centres in different parts of the country was the only practical procedure.

Dr. NORMAN MOORE remarked that he did not want it to go out that the hospitals and medical schools had not carried out the kind of research work to which Sir Clifford Allbutt had referred. They had, on the contrary, been spending large sums of money on it, and if the plan to which Sir Clifford Allbutt had alluded came into force they would form a large proportion of the institutions. He thought that the more discussion there was of these subjects and the more ways in which these questions were put before the Council the better.

Sir C. NIXON said that he would strongly object to a policy of centralisation. He did not think on the whole that the medical profession would get very much aid and encouragement from the State. The only aid which they could get from the State was money, and it was very chary in giving money. For improvement research work must be looked to. He expressed the opinion that a great deal of money under the Insurance Act which would be spent on the sanatorium treatment of consumption could be applied with far greater benefit in other directions. A great deal of the money would go into the structure.

The PRESIDENT observed that as chairman of the Insurance Act Committee he ought to say something. The National Insurance Act was framed without the Council having the opportunity of first seeing it. The Act had an effect on medical education, and it ignored the hospitals. These matters were overlooked by the authorities until it was too late. The Council had intervened and had been told that the hospitals were outside the scope of the Act. In the Act there was a provision for a

certain sum of money to be set aside for research. It was quite possible that a Government with the best intentions might set up institutions which might be quite useless. He thought that in this motion there was a suggestion that nothing should be done detrimental to medical education by the use of this sum of money on research. If that was what was meant he was sure that the Insurance Act Committee might say something to the authorities concerned and warn them that the expenditure might be advantageous or not to medical education. What further developments might be could not be foreseen. No serious ones were likely to come before the next meeting of the Council. The question was whether the Council should not make representations if there was a chance of the research grant being applied in a wrong direction.

Dr. LITTLE referred to the fears that subscriptions would be withdrawn from hospitals in consequence of the Insurance Act. He also apprehended that if confinements in hospitals were curtailed there would be no adequate means of teaching students and midwives their duties.

Dr. MACDONALD pointed out difficulties with which practitioners were faced in applying modern methods of diagnosis and treatment under the Insurance Act. If the Act was carried out they should like to see a scheme in operation such as Sir Clifford Allbutt suggested. But whatever the Insurance Act Committee might consider or whatever the authorities might desire, an amending Act would be required. He understood that it was the idea of the Government that there should be no amending Act for three years. He did not think that there was any need for hurry. The amendment of an Act of Parliament was a difficult thing. It was quite possible that the Government might not carry out such a scheme as Sir Clifford Allbutt had suggested. There were no arrangements under the Act at the present time.

The PRESIDENT: They may be proposed under the Regulations hereafter.

Dr. MACDONALD: They are not in the Act at the present time.

Sir CLIFFORD ALLBUTT, in replying to the discussion, said that it was quite clear that wherever the money was to come from, it was not to come out of the pockets of the practitioners of this country. They could not do it. He was not sure that those in authority understood that none of the members of the Council knew what margin of money there might be to carry out research in any other field than tuberculosis. He dared say that Dr. Macdonald had heard that the Government did contemplate having a very large and costly machinery for the development of public medicine on the lines which he had indicated. It was the business of the Council to see that steps were not taken prematurely which would interfere with the education of the senior as well as the junior members of the medical profession.

The motion was agreed to.

Conclusion of Session.

This concluded the business on the programme.

On the motion of Dr. NORMAN MOORE, the President was thanked for his services in the chair.

The PRESIDENT, in replying, congratulated the Council on the shortest session which had taken place in his memory.

The session of the Council then came to a conclusion.

MEDICINE AND THE LAW.

Prosecution of an Unqualified Person in Poplar.

THE Medical Defence Union, having undertaken the case on the recommendation of Mr. Wynne Baxter and of a jury at an inquest which he had conducted, recently prosecuted with success a man named Edwards at the Thames police court. His conduct had been brought to light by the fact that he had treated a man who had died from syncope following pneumonia, who was probably under the impression that he was being attended by a qualified medical practitioner. Other instances of Edwards's readiness to make a pretended diagnosis, to supply bottles of "medicine," and to accept money for doing so, were supplied in the witness-box by healthy emissaries of the Medical Defence Union, upon whom the defendant had used the stethoscope in a surgery where artificial teeth and bottles were displayed, as well as a colourable imitation of a diploma. The defendant had also at one time exhibited a card upon which the letters M.C.S. followed his name. He stated that these initials had been suggested to him by a medical man who had lodged with him, and he said that he believed them to stand for "Massachusetts College of Surgeons." He had declared Mr. Tyrell, a clerk to Messrs. Hempsons, solicitors to the Medical Defence Union, to be suffering from bronchitis and bronchial catarrh, and had told him that his bronchial tubes were closed, charging 1*s.* 1*d.* for the information and for a bottle of liquid the nature of which was not stated. The serious nature of the deception practised from the point of view of the safety of the public having been pointed out, a fine was imposed of £10, with £5 5*s.* costs. In the present state of the law no more serious penalty could be expected, but it becomes more and more obvious that the public is insufficiently protected from the practices of those who pretend to the possession of a medical status.

ROYAL MEDICAL BENEVOLENT FUND.

AT the November meeting of the committee 29 cases were considered, and grants amounting to £280 made to 25 of the applicants. Appended is an abstract of the cases relieved:—

Daughter, aged 50, of late M.D. Edin. Capital entirely exhausted by unavoidable expenses due to prolonged and severe illness, and is now dependent on friends for shelter. Relieved three times, £34. Voted £12.

Widow, aged 50, of M.B. Edin. No income; endeavours to support herself by letting rooms, and receives slight help from a daughter. Voted £5.

Widow, aged 60, of L.R.C.P. Edin. Quite unprovided for at husband's death a few months ago, and finds great difficulty in obtaining employment. Voted £10.

Daughter, aged 61, of late M.R.C.S. Tries to maintain herself by taking boarders, but has nearly exhausted her small capital and is in bad health. Voted £12.

Daughter, aged 38, of late M.R.C.S. Has been obliged to give up her situation on account of ill-health, and is consequently dependent upon her mother, an annuitant of this fund. Voted £5.

Widow, aged 72, of L.R.C.P. Edin. Has a pension from a charitable society, but requires help owing to the ill-health of a daughter. Voted £5.

Son, aged 18, of late M.R.C.S. Earns £50 a year as a clerk, but asks for a little help towards the expenses of his mother's funeral. Voted £5.

Daughters, aged 60 and 55, of late M.R.C.S. No income; small earnings from needlework and receives slight help from friends. Relieved eight times, £114. Voted £20

Widow, aged 51, of L.R.C.P. Irel. No income and health feeble. Is temporarily in charge of a furnished cottage, but has to find food, &c. Relieved five times, £60. Voted £12.

Widow, aged 54, of L.F.P.S. Glasg. Tries to support herself by receiving boarders, but finds great difficulty in obtaining them and has had a very bad season. Relieved twice, £20. Voted £10.

Widow, aged 65, of L.R.C.P. Edin. Was left quite unprovided for at husband's death a few years ago and has since developed a chronic complaint by which she is quite incapacitated. Is given a home by a sister, but asks help towards the unavoidable expenses of an attendant. Relieved three times, £36. Voted £12.

Widow, aged 75, of M.D. Lond. Has two small annuities, but is crippled by chronic rheumatism, and asks help to obtain a few small comforts and necessary clothing. Relieved seven times, £41. Voted £5.

Widow, aged 65, of L.R.C.P. Edin. Has a small pension, but it is insufficient for bare necessities, and applicant is in bad health. Relieved five times, £37. Voted £10.

L.R.C.P. Edin., aged 55. Used to practise in Glasgow, but has been in bad health for some years, and is now incapacitated by spastic paraplegia. Is given a home by a sister, who can ill afford to help. Relieved eight times, £96. Voted £12.

Daughter, aged 67, of late M.D. St. And. Income less than 10*s.* a week, and in such bad health that active employment is quite impossible. Relieved five times, £60. Voted £12.

Widow, aged 53, of L.S.A. No income, and occupation impossible on account of deafness and defective eyesight. Slight help from a son earning 22*s.* a week. Relieved six times, £76. Voted £18.

Daughter, aged 65, of late M.R.C.S. Income less than 10*s.* a week, and has always been in delicate health. Relieved four times, £48. Voted £12.

Daughter, aged 60, of late L.R.C.P. Is mentally deficient and has been for many years dependent on a sister who is a nurse. Relieved seven times, £80. Voted £12.

Daughter, aged 59, of M.D. Lond. Used to partially support herself by teaching, but is now, owing to age and ill-health, dependent for shelter on a sister whose income is very small. Relieved 29 times, £218. Voted £12.

Daughter, aged 58, of late L.S.A. Has been in feeble health for many years and is now only able to earn a few shillings a month. Slight help from a relation. Relieved 13 times, £122. Voted £15.

Widow, aged 71, of L.R.C.P. Edin. Entirely dependent on an old age pension and the help from this Fund. Eyesight failing and crippled by rheumatoid arthritis. Relieved 5 times, £60. Voted £12

Daughter, aged 53, of late L.R.C.P. Edin. No income, and quite unable to maintain herself on account of chronic ill-health. Slight help from an uncle and a brother. Relieved three times, £32. Voted £12.

Widow, aged 67, of M.R.C.S. Lives rent free at a ladies' home and has a pension of £10 per annum, but requires a little further help. Relieved three times, £36. Voted £6.

Daughters, aged 60 and 54, of late M.R.C.S. No income; endeavour to support themselves by taking boarders, and receive a little help from relations; health indifferent. Relieved three times, £46. Voted £18.

Daughter, aged 64, of late M.R.C.S. No income; slight help from relations; health very bad. Relieved six times, £72. Voted £18.

Contributions may be sent to the honorary secretary, Dr. Samuel West, 15, Wimpole-street, London, W.

THE LANCET.

LONDON: SATURDAY, DECEMBER 7, 1912.

The Scientific Spirit in Medicine.

Dr. A. E. GARROD, in an address to the Abernethian Society under this title, published in the November number of the *St. Bartholomew's Hospital Journal*, states that he was led to select the consideration of the scientific spirit in medicine as his subject after reading the report upon Medical Education in Europe, written for the Carnegie Foundation for the Advancement of Teaching by Mr. ABRAHAM FLEXNER. Mr. FLEXNER'S report certainly contained the suggestion that there was a lack of the scientific spirit and atmosphere in our British schools of medicine, and Dr. GARROD points out the fundamental importance of scientific method in all branches of medical science, scientific method differing from scientific spirit, in that the latter does not rest content with applying that which is already known, but, in addition, serves the double purpose, first of stimulating advance by pressing forward into the regions of the unknown, and second of restraining hasty, unchecked, and uncontrolled conclusions. He rather happily compares the scientific spirit to the hormones which stimulate the growth and activities of the parts of an organism. He admits that the organisation of research into medical subjects is more efficient in Germany than in our own country, and points out that a large proportion of the great discoveries of the past of which British science is so justly proud have been the outcome of individual effort, emanating from men not holding academic posts. In this country we do not make the use we should of the guidance of our scientific leaders. There are probably few who would not agree that Dr. GARROD has here laid bare one of the chief defects of British methods in matters relating to medical research, or who would quarrel with his contention that "what is chiefly needed nowadays is organised collective effort under inspiring guidance, each man sharing in the task and contributing his share by cultivating a larger or smaller field of his own."

But there are other difficulties in our way. If we in this country are falling behind our brethren in other lands in scientific medicine, it is in no small measure due to the fact that our workers are confronted with so great an array of popular sentiment and prejudice, not only in regard to vivisection, but also in the readiness to believe evil of hospitals and their methods, and in the increasing difficulty in obtaining subjects for dissection. The influence of the scientific spirit in the practical application of the results obtained to clinical medicine and surgery is, of course, only indirectly influenced by these drawbacks, and a more serious danger lies in the disassociation that is threatened of laboratory and clinical work. We are glad to find Dr. GARROD opposed to the system whereby those examinations which are comprised under the general heading of clinical pathology are likely to pass out of the hands of those working in the wards, and thus in close relation with the patients; such a departure must be regarded as a grave misfortune and one which the German system obviates, since there the clinical laboratories are distinct from the pathological institute, and are under the control of the head of the "klinik." The application of scientific method and spirit to therapeutics and the replacement of empiricism by the rational employment of the means of cure are marked examples of the progress of medicine with us to-day, but here Dr. GARROD, with considerable breadth of view, pays tribute to the services of empiricism, affirming that even now it is by no means dead or useless. It is a fact that must be admitted that empiricism finds a useful application, for example, in the trial of new remedies, introduced on scientific grounds for a special object, in the hope that some benefit may result. The scientific spirit imposes caution and enjoins judicious examination of evidence in these cases, as well as the careful weighing even of traditional and apparently well-established teachings. But the caution may be displayed at the risk of the medical man's reputation for wisdom with the public. The difficulties which may be encountered owing to the vague character of popular notions in regard to medical questions are very serious. The public is too apt to mistake scientific caution in statement for evidence of incompetence, and to estimate a ready dogmatism above a reasoned uncertainty.

The Mutual Amenities of Surgeons and Anæsthetists.

As with many other questions of medico-legal and medico-ethical importance, there are few "leading cases" or judicial decisions to guide those who would seek to lay down settled principles for the legal relations of surgeon, anæsthetist, and patient. It is presumable that should such issues some day arise before a legally constituted tribunal, the result will depend on the ordinary common law applied to the merits and circumstances of each individual case. In attempts, therefore, to define the legal responsibilities of those who take part in operations or examinations conducted under anæsthesia, only general lines have been indicated by those authors who have dealt with this subject; and this is a necessary attitude, since the opinions which judges and juries may form on various contingencies, not in themselves very uncommon or remote, are as yet matters of pure conjecture.

Both the surgeon and the anæsthetist of the present day are individually, and in their mutual connexion with each other and their patient, on a very different footing from that which obtained when surgery and anæsthesia were nascent sciences. For many years after the introduction of general anæsthesia the surgeon was allowed by general consent control over the actions of the anæsthetist, and his position was quite justifiable. He assigned to the anæsthetist the same status of tutelage as that of his assistant; and the corollary to this was that he accepted

full responsibility for the conduct and consequences of the anæsthesia. With the increasing number and complexity of major operations came the need for deeper and longer anæsthesia, and therewith for greater knowledge and skill on the part of the anæsthetist. This development entailed less and less interference and supervision on the surgeon's part, since eventually the special anæsthetist came to know a very great deal more than any surgeon about the art and especially the science of anæsthesia. At the present time there are, indeed, some surgeons who still seek to relegate the anæsthetist to his old position of subordination; but even they can seldom be induced to admit any legal liability for his acts. The view advocated in THE LANCET has been upheld in the *Law Times*—namely, that the anæsthetist, provided he be a qualified practitioner, is liable for any default of his own committing, and that no liability in that respect attaches to the operator. The same view has been expressed in an *obiter dictum* from the Bench. This apparently simple and straightforward proposition by no means covers all the points of contact between surgeon and anæsthetist. Apart from any matters such as might engage the attention of a court of law, there are many incidents in their coöperation which may disturb the amenities between them. In actual practice it is often extremely difficult for an anæsthetist to take an independent line in the event of a disagreement with the operator as to the proper course of action in unusual circumstances. A resident officer, for example, in a voluntary hospital is naturally reluctant to exercise a judgment which may lead him into opposition to a member of the visiting staff; and in a rate-supported institution the difficulty of a junior officer is greater still, since the preference or reverse of superior officers may affect his future career. Again, in private surgical practice the surgeon is generally allowed, or even expected, to nominate his anæsthetist for any contemplated operation—a custom in itself wholly wise and salutary. Such an anæsthetist, particularly if he be a specialist in this branch, is dependent for his livelihood upon the goodwill of the surgeons with whom he works, and is hardly tried should his private judgment lead him to conclusions which do not tally with those of the operator. For instance, the choice of the drugs to be used, the method of exhibiting them, and the advisability of discontinuing an operation in a patient who shows signs of failing vitality are some of the topics on which differences of opinion may arise. Fortunately these divergences are rare, and when they do occur it is most unusual for any serious friction to take place. Tact and forbearance on both sides are required and are generally forthcoming.

There are, however, occasions when the first consideration in all medical practice—the interests of the patient—may demand, or appear to demand, a course of action which is bound to throw surgeon and anæsthetist into antagonism. A case exactly in point has recently been submitted to us by a resident medical officer in a voluntary hospital. His duties include the administration of anæsthetics for a certain member of the staff; and this surgeon practises the removal of tonsils and adenoids by a method which the resident regards as highly dangerous and the frequent cause of grave anxiety on the patient's behalf. We are not told any details of the technique; but it may be supposed that the danger apprehended must be either that of hæmorrhage or of respiratory complications from choice of posture or anæsthetic. The query is propounded to us, Is the resident, whose previous experience as an anæsthetist extends to over one hundred cases of tonsils and adenoids, justified in refusing to coöperate with a surgeon whose methods he regards as dangerous? The facts as set forth by our correspondent, who is one of the interested parties, are too vague to admit of any but a conditional answer. If the risk which the anæsthetist anticipates is one due to insistence by the surgeon on a particular method of anæsthetisation (e.g., very deep chloroformisation) or on a faulty posture (e.g., the dorsal posture with the head extended over the end of the table), then we believe that protest and even refusal to be associated with the case are not only justifiable but imperative. If, on the other hand, it is some operative principle or detail which forms the basis of criticism, the case is more difficult. Unless the resident could persuade the rest of the visiting staff that the surgeon's methods were contrary to the accepted canons of surgical practice, the probable result of a protest would be that he would have to resign his post. A preferable course would be to consult some senior member of the staff about the *impasse*, choosing someone of ripe professional experience and much knowledge of the world. Advice from such a source would probably go far towards a satisfactory solution, because the adviser would necessarily know more than any outsider of the merits of the contention. The very nice point which is raised in the communication made to us illustrates the need for a cordial understanding between surgeon and anæsthetist, and for the due observance on both sides of those amenities of conduct which may even make or mar the success of an operation.

The National Insurance Act.

THE Council of the British Medical Association have now met to consider the result of the interviews held last week between the Chancellor of the Exchequer and the Insurance Commissioners on one side, and on the other a deputation of five members of the Association, chosen for that purpose by the Representative Body at its recent meeting. The Council had before them the memorandum from Mr. LLOYD GEORGE on the outcome of the interviews. This is published in THE LANCET this week on p. 1620. They also had the annotations of the State Sickness Insurance Committee upon this document which they have now issued to the Association, together with a report on the position as it seems to be modified by Mr. LLOYD GEORGE'S latest proposals. The conference at the Treasury, it will be remembered, was sanctioned by the Representative Body for the purpose of putting before the Government the reasonable demands of the medical profession. While on the one hand the Government was informed that the profession declined to take service under the Act and Regulations as these stood on Nov. 20th, it was tacitly admitted on the other hand that the cardinal points were open to some revision. The five representatives of the Association

were given no powers to come to any settlement on behalf of the profession, and it was agreed—although the legality of the method has been questioned—that upon the result of the conference being made known the divisions of the Association should meet and vote for accepting or rejecting the terms finally proposed by the Government, and that the combined record of all the members' votes should be regarded as decisive. All this was understood before the deputation waited upon the Chancellor.

Remembering the natural anxiety of the Government to set up a satisfactory medical service under the Act by Jan. 15th next, it was scarcely doubted that some concessions would be offered to the profession; but it was equally probable that the outcome of the conference would leave many medical men entirely opposed to the conditions of service, however amended these might be in detail. This feeling is reflected in the Council's report which attempts to put the present situation fairly before the members of the Association without leaning strongly to one side or the other. In view of the presence of two parties within the Council, a clearer lead than this could hardly have been expected from that body.

If we take in order the principal objections of the medical profession to the conditions of service proposed under the Regulations or outlined by the Chancellor of the Exchequer when he announced that a larger sum of money would be available for medical benefit, and if we examine the way in which the Chancellor now offers to deal with these objections, it becomes clear why the Council of the Association have avoided the responsibility of advising acceptance or rejection of the revised terms. The demand for a flat income limit throughout the country has at length been abandoned by the Association, while the demand for a fuller medical representation upon Local Insurance Committees, which many authorities regard as of far greater importance, has at last been granted by the Government. The question of mileage has been answered by a promise that in exceptional districts this shall not be a charge upon the fixed sum set aside for medical remuneration; but the distance within which no claim for mileage is admissible remains at three miles from the nearest practitioner's house—in many cases a most inequitable limit. A new body, a Committee of Enquiry, composed of members of the medical profession and one lawyer, is contemplated, its function being to advise the Commissioners with regard to the removal of medical men from the panels. The practitioner's general right to dispense medicines has been denied, though in certain circumstances he may do so. The suggestion that medical men should keep "simple records" of the cases under their care has been whittled down to a request for bare anonymous details for statistical purposes, while it is announced that the proposed inspection and supervision of their work, which medical men have objected to on principle, really mean nothing at all. Changes have been made in the Provisional Regulations embodying these points.

The concessions which the deputation has obtained from the Chancellor of the Exchequer seem thus to be numerous but of no great importance, save that the representation of medical men upon the Local Insurance Committees has been raised to one-tenth. Every member of the profession should consider carefully the revised terms in the light of probable after-events. The responsibility of voting for or against acceptance, which now falls upon individual medical men, is clearly very great. Assuming that the Government have really said their last word, it is not now a question of closing or reopening negotiations, but of giving provisional consent to a definite scheme of service. The dangers of absolute refusal are admittedly great, but it is possible that a majority of the electorate may prefer to face these rather than commit themselves to the less known hazard of acceptance.

The Provisional Regulations with regard to the administration of medical benefit were published in full in THE LANCET of Oct. 5th, p. 979, but in accordance with the Memorandum of the Chancellor of the Exchequer (see p. 1620), and with the most recent financial offer, they have now been modified in many, if small, particulars. The Regulations in their new form have not reached us in time for publication this week. They will be accompanied by: 1. A letter from the Commission to Insurance Committees explaining the administration of medical benefit. The letter aims at making many things plain as to the working of the Regulations which are not easily discoverable from the perusal of the Regulations themselves. 2 and 3. Model forms of agreement which an Insurance Committee may use with the practitioners in its area (α) on the capitation basis, and (β) on the payment by attendance basis. 4. Model letter of invitation from Insurance Committees to the practitioners in their area to apply to be placed on the panel.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Pinkuss, a Berlin gynæcologist, has been granted the title of Professor.—*Breslau:* Dr. Stertz has been recognised as *privat-docent* of Neurology and Psychiatry.—*Budapest:* Dr. Ladislaus Blaskovics, *privat-docent* of ophthalmology, and Dr. Sigmund Gerloczy, *privat-docent* of infectious diseases, have been granted the title of Extraordinary Professor.—*Cracow:* Dr. Emil Godlewski, extraordinary professor of anatomy and embryology, has been promoted to an Ordinary Professorship.—*Freiburg:* Dr. K. Gauss, *privat-docent* of gynæcology, has been granted the title of Professor.—*Giessen:* Dr. August Brüning, *privat-docent* of surgery, has been granted the title of Professor.—*Göttingen:* Dr. E. Schultze, professor in Greifswald, has been appointed to the chair of Psychiatry in succession to the late Dr. Cramer.—*Königsberg:* Dr. K. Goldstein, *privat-docent* of psychiatry, has been granted the title of Professor.—*Lausanne:* Dr. August Rond, extraordinary professor of anatomy, and Dr. Hermann Reitzke, extraordinary professor of pathological anatomy, have been promoted to Ordinary Professorships.—*Modena:* Dr. L. Tarabini-Castellani has been recognised as *privat-docent* of Medical Pathology; and Dr. B. Formiggini as *privat-docent* of Surgery and Operative Medicine.—*Munich:* Dr. von Angerer, professor of surgery, body physician to the Prince Regent, has been granted the title of "Yr. Excellency."—*Palermo:* Dr. C. Coppolino has been recognised as *privat-docent* of Dermatology and Syphiligraphy.—*Pavia:* Dr. G. Fornario has been recognised as *privat-docent* of Medical Pathology.—*Pisa:* Dr. M. Pennetta has been recognised as *privat-docent* of Medical Pathology.—*Rostock:* Dr. H. Queckenstedt has been recognised as *privat-docent* of Medicine.—*Sienna:* Dr. Pergola has been recognised as *privat-docent* of Bacteriology.—*Tübingen:* Dr. O. Nägeli, of Zürich, has been appointed Extraordinary Professor of Medicine.

Annotations.

"Ne quid nimis."

DR. FRIEDMANN'S "CURE" OF TUBERCULOSIS.

So many articles, and some of a most unguarded character, have appeared in the lay press during the last three weeks concerning a supposed cure of tuberculosis discovered by Dr. F. F. Friedmann, of Berlin, and communicated to the medical profession for the first time in a paper read by him before the Berlin Medical Society early in November, that it has become necessary to put briefly before our readers how far Dr. Friedmann's claims can be substantiated, and what are the main reasons for believing that his discoveries do not imply any real progress in therapeutics. Dr. Friedmann, who enjoys, as far as we know, no particular scientific advantages due to attachment to any pathological institute or large general hospital, considers that he has discovered a method, the technique of which is as yet unrevealed to the medical profession, by which he can so attenuate the bacillus of tuberculosis as to make injection of the living bacilli into the circulation of the tuberculous subject a possible proceeding. He claims that the bacillus in question, whilst acting as a satisfactory antigen, is devoid of the slightest toxicity. There is no evidence whatever that he is able to do this, and every ground for believing that he is mistaken. Considerable opportunities have been given to Dr. Friedmann by distinguished medical colleagues in Berlin to employ his treatment upon patients suffering from undoubted surgical tuberculosis. We understand that in the case of the beds placed at his disposal at one institution at least Dr. Friedmann was only prepared to test his claims upon cases which he himself selected, and the results of the treatment were not strikingly other than would have been anticipated upon a skilled prognosis. The general clinical evidence which Dr. Friedmann has been able to produce (and we have every reason to believe that he produces it in all good faith) is not in any way a sound scientific support of his theories or procedure. Lastly, it should be noted that, in the employment of the remedy upon animals, although the subjects may have lived longer than the control animals, the unvarying end was that they all developed tuberculosis. In all these circumstances we are sure that our readers, many of whom for the past three weeks must have been bombarded with requests for information on the subject, will be well advised to state in the clearest possible terms that no "cure" has been discovered; and they can go further and state that no real advance in therapeutics has been made. This is not to say that there is no possible support for future therapeutic developments to be derived from what Dr. Friedmann has discovered, though it must be remembered that we do not know exactly what it is that he has discovered; but at the present moment the only possible attitude for the medical profession to adopt is that of willingness to receive with interest any further information which he may have to supply and any further and better evidence which he can bring forward. We can only believe, having regard to the wide publicity which Dr. Friedmann's "cure" has received, that he has been the victim of ill-informed and credulous reporters, so that an incomplete and as yet totally unverified therapeutic departure has been published broadcast in the daily papers of the European continent as a conclusive scientific discovery.

PISTOL SHOOTING: THE ATTEMPT UPON THE LIFE OF SIR EDWARD HENRY.

A NOTE on recent pistol shootings in THE LANCET of Nov. 9th, p. 1338, commenced as follows: "If the series of crimes recently committed with pistols does not lead to more stringent measures for the prevention of the sale and carrying of these dangerous weapons, the country will presumably have to wait until a Cabinet Minister or some equally prominent person is assassinated and public feeling thoroughly aroused." Within three weeks of the publication of these words Sir Edward Henry, the Chief Commissioner of Police in the County of London, has been shot, and only by a most fortunate chance has escaped death. It is to be hoped that the present state of affairs will not be allowed to continue until an attack of a similar character creates a vacancy in the Cabinet. Sir Edward Henry, of all people, should be the best qualified to advise the Government as to the practical possibility of checking the carrying of pistols, and he should be asked to advise upon the subject as soon as recovery from his wound permits him to do so. Upon his escape he is to be most warmly congratulated, and we may add that we are certain that his own personal mischance was not required to arouse him to the seriousness of the danger in our midst. It has been fully recognised by the police for many years.

TERMINAL STATES IN PELLAGRA RESEMBLING GENERAL PARALYSIS.

THE growing importance of pellagra as a neurological problem has been accentuated by the recent paper of Dr. L. Sambon, alleging that the disease is now known to be endemic in the Shetlands and in certain other parts of Scotland, while an undoubted case of the same affection has been found in one of the Scottish asylums. Pellagra is widely disseminated over the southern states of North America, where its continued spread is giving rise to some uneasiness. In view of the increased attention given to the matter as evidenced by the number of communications that have appeared within the last year or two, reference may be made to a paper by Dr. Eugene Bondurant, of Mobile, Alabama, in the *Journal of Nervous and Mental Disease* for November, on the Resemblance between General Paralysis of the Insane and Certain of the Terminal States of Pellagra. Among the cases there quoted is the following. A previously healthy man of 48, a farmer, suffered for some years from attacks of summer diarrhœa, and in addition from "sore mouth" and "eczema" on the hands. Two years before coming under observation he had a slight stroke, but made an excellent recovery. A year later he began to suffer from epileptiform convulsions, and from that time showed a change in disposition, with mental deterioration, confusion, emotional instability, and irrationality of conduct. He became unsteady in his gait and his speech and voice altered. On examination he was found to present fibrillary twitchings in the muscles of the tongue, lips, and face; he showed much muscular weakness also. Articulation was very defective, with elision of syllables characteristic of general paralysis. The pupils were unequal and the tendon reflexes were all exaggerated. The patient denied syphilis and the Wassermann reaction was negative. When under observation he exhibited for some weeks an unmistakeable pellagrous erythema on the elbows, wrists, and knuckles. There was also some gastro-intestinal disorder. Other similar cases are quoted by Dr. Bondurant in which the resemblance to general paralysis was equally close. The physical symptomatology, indeed, may be almost identical. Fibrillary tremors, speech

defects, muscular weakness, incoördination, and exaggeration of the tendon reflexes, may be typically present. Sometimes the pellagrous condition resembles the tabetic form of general paralysis, with pains in the legs and elsewhere, absent knee-jerks, and definite sensory changes. On the other hand, the mental condition in the two diseases is not always quite so closely related. The pellagrous paretic is as a rule neurasthenic and despondent, and lacks the emotional exaltation and megalomania of true dementia paralytica. The question of diagnosis may therefore present certain difficulties, but a history of recurring erythema on the exposed surfaces of the skin suffices to establish pellagra. It is clear that the close analogies between the two diseases, at least in some cases, throw an interesting light on the problem of the nature of pellagra and on the mode of entry of the virus into the central nervous system. There can be little doubt of the intimacy of relationship, as far as clinical symptomatology is concerned, of the different lymphogenous infections of the central nervous system, while anatomically, at least in part, pellagra may in some instances be not inaptly described as a histological tabes. By a consideration of these analogies our views on the neuropathology of certain diseases are necessarily widened, and it may be that further research will show still closer connexions between pellagra and a group of familiar conditions associated with the invasion of the neuraxe by viruses proceeding along the lymph paths.

"THE DEFICIENCY DISEASES."

IT is now generally accepted that beri-beri is due to diet of polished rice and that in the removal of the outer layers some ingredient essential to nutrition is taken away. What this ingredient is has been the subject of much investigation. Mr. E. A. Cooper and Dr. Casimir Funk made experiments at the Lister Institute of Preventive Medicine which appeared to show that the disease was due to the absence of some substance, soluble in water, devoid of phosphorus, and precipitated by phospho-tungstic acid.[1] In the *Medical Review* for November some further work of Dr. Funk is reviewed. He appears to have isolated a substance from rice polishings, a minute quantity of which will cure birds suffering from polyneuritis induced by diet of polished rice. He has found that this is a basic crystalline body with the formula $C_{17}H_{20}N_2O_7$. He therefore terms it "the beri-beri vitamine." It seems to be necessary for the nutrition of the nervous system. He has also found it in milk, yeast, ox-brain, and lime-juice. Under the significant title of "The Deficiency Diseases" Dr. Funk has discussed a number of diseases—beri-beri, epidemic dropsy, scurvy, ship beri-beri, and pellagra, all of which he holds to be due to some deficiency in the diet, a view which in the case of pellagra especially is not held generally. With regard to scurvy Professor Axel Holst, a Norwegian investigator, induced in guinea-pigs a disease resembling scurvy by feeding them on barley, oats, or rye, and cured them by adding to the diet fresh vegetables (such as potatoes, carrots, or cabbage) or by giving lime-juice. Many facts show that beri-beri and scurvy are due to a deficiency of different substances. Foods which prevent beri-beri and polyneuritis, such as yeast, oats, and barley, do not prevent scurvy. On the other hand, during germination grains develop the power to prevent scurvy. This fact suggests that the scurvy vitamine can be formed by enzyme action from the beri-beri vitamine. It is surprising that a chemical change which can be performed by the enzymes of the seed cannot be reproduced in the animal body. Ship beri-beri is a scourge of Norwegian sailing ships, but appears to be rare on English ships because the food is better. It is observed on long voyages when the supply of fresh provisions gives out. With symptoms of scurvy there is polyneuritis. The nutritive deficiency in white flour which has been deprived of its germ is emphasised by food reformers. Their views are borne out by some experiments by Dr. Leonard Hill and Dr. Martin Flack, who found that young rats fed on white flour did not thrive as well as others fed on flour to which the wheat germ had been added. The deficiency does not seem to be important in the case of people with an abundant dietary, but in the case of poor children almost subsisting on bread the question cannot thus be dismissed. Evidence that a diet of white bread is an evil is quoted in the same article in the *Medical Review*. Dr. John M. Little, of St. Anthony, Newfoundland, states that at certain periods of the year the diet of many of the people of that country is reduced to bread and tea. Agriculture is difficult, and many never have a vegetable. Game, deer, birds, and rabbits are scarce. The fish is sold to buy bread, which is the cheapest food. At these periods the people complain of certain symptoms—night-blindness, retention of urine, numbness or tingling in the limbs or across the abdomen. These are the prodromal symptoms of beri-beri. When the period of a more varied diet arrives they disappear. But under the stress of such conditions as pregnancy or a wetting and chill definite symptoms of the disease—paralyses, involvement of the heart, œdema, and sometimes death may follow. On one part of the coast where beri-beri had been most common a large vessel went ashore in 1910 and whole-wheat flour was unloaded to lighten her. The people got the flour, and neither the disease nor any of the prodromal symptoms have since been observed. The old inhabitants, who remember the days when brown bread was the diet, say that the disease was then unknown.

[1] THE LANCET, Nov. 4th, 1911, p. 1267.

THE INNOCENT USE OF GERMICIDES IN THE DIETARY.

IN the view of the public the standard enemy of disease germs is carbolic acid, but, as is well known, there are many substances with pleasanter general properties than this acid which are equally effective. Mention need only be made of the essential oils, like thymol, geraniol, those of cinnamon, cloves, rosemary, eucalyptus, rose, and lavender, which may safely be counted amongst the agreeable antiseptics, while having in this regard an even stronger power than carbolic acid itself. It is also interesting to recall some of the antiseptic agents which are used commonly in conjunction with certain articles of our daily diet. One of the most refreshing and palatable non-alcoholic beverages, for example, is lemon squash, and it is somewhat remarkable that the constituents which give this beverage its attractions prove to be germicides. It has long been known that water charged with carbonic acid gas loses after a while what bacteriological activities it possessed. This observation has recently been confirmed, the evidence showing that the germicidal effects are greater as the pressure of gas is increased. It would seem to follow that deep natural waters charged with carbonic acid gas must be sterile, at all events before they reach the surface, and numerous examinations have shown that natural aerated waters exhibit a freedom from active germs. In the case of lemon squash, however, there is present besides carbonic acid gas (if the mixture is not violently and erroneously stirred with a spoon, as is so often ignorantly done) the citric acid of the lemon, and citric acid, even in weak solutions, has been shown to be inimical to the growth of certain pathogenic organisms. Tartaric acid appears to have a similarly

destructive effect upon organisms, so that, from the point of view of bacteriology, grape-juice and soda-water, also a wholesome and agreeable beverage, should present the same advantages. The eating of lemon-juice with the oyster becomes thus a scientific proceeding, as hidden infections may thus be destroyed. Vinegar, with its acetic acid, of course, acts in a similar way. Lemon-juice and vinegar, in fact, may be counted as dietetic antiseptics, and their use as adjuncts in salads and raw shell-fish and so forth has a greater significance than at first sight appears.

THE DANGERS OF "SHUTTLE-KISSING."

THE committee which reported this year to the Home Office and Local Government Board on the practice of "kissing the shuttle" in weaving sheds pointed out that the act is not merely one of mouth-suction, but requires a sudden and forcible inspiration to induce a strong draught of air through the eye of the shuttle, and thus carry the thread into the mouth of the operator. In this way particles of dust, dye, fluff, thread, or size, or possibly disease germs, may be carried through the mouth, trachea, and bronchi into the lungs. It is estimated that a single weaver may perform this act as many as 450 or 500 times in a day, and it is a common result of the working arrangements that the same shuttle is repeatedly "kissed" by two or more persons. Mr. Howard S. Murphy, of Preston, has sent us specimens of the material removed after a few weeks from the grids attached to a Murphy and Simpson's mechanical sucker, which illustrate the quantity of objectionable particulate matter that may reach the mouth or lungs in the course of ordinary "shuttle-kissing." The committee, it will be remembered, while considering that the dangers of the practice have been exaggerated, concluded that the habit is objectionable and potentially dangerous, and ought to be discontinued. It did not recommend immediate legislation or regulations for the purpose, but relied on the publicity given to the subject so to stimulate invention and popular feeling that no drastic administrative action would be found necessary after a few years. There is, however, a risk that a subject which has, in the public and official mind, been disposed of by the issue of a Blue-book will be permitted to fade into oblivion, and we welcome, therefore, the evidence that mechanical suckers, automatically threading shuttles, or other methods for preventing this unnecessary and insanitary practice are being increasingly adopted in weaving sheds in this country and abroad. We trust that the Lancashire weavers will themselves coöperate to secure its speedy disappearance in this country.

BIOCYTONEUROLOGY AS REVEALED BY THE ULTRA-MICROSCOPE.

HITHERTO our study of the cytology of the neurons, as of that of cellular structure in general, has been based on the examination of the images obtained after the cell has been treated by various fixatives and stained by various colouring matters, or impregnated, it may be, by various metallic solutions. Notwithstanding the fact that by such methods a great amount of knowledge on the state of the nerve cell in health and in disease has been amassed, it cannot be gainsaid that research of this kind is not much more than the prosecution of the cult of the cell's cadaver, so to speak, and it may be questioned whether the images thus obtained correspond to the reality, and whether the conclusions hitherto drawn as to cellular structure may be regarded as justifiable and final. Recent progress in our knowledge of the constitution of colloids compels us to consider with reserve the apparent structure revealed in nerve cells by the action of fixing agents, all of which are at the same time congulants. As a matter of fact, most intracellular substances, be they albuminoids, lipoids, or carbohydrates, are in a colloidal condition, and a revision of our conceptions of cellular structure is therefore desirable. A long and instructive essay on the whole subject will be found in the *Nouvelle Iconographie de la Salpêtrière* for May and June of this year, written by Professor Marinesco, of the Faculty of Medicine of Bucharest. Professor Marinesco devotes almost the whole of his paper to a consideration of the picture of living nerve cells obtained by the ultra-microscope, and of the modifications produced by the action of widely varying chemical substances. It has long been known that colloids contain minute particles in suspension, particles which, while smaller than those of true suspensions, are larger than the true molecule. By the aid of the ultra-microscope these particles can be seen, and they have been seen in the salts of the colloid metals, in colloidal hydroxides, in organic colloids, and in certain colours. It is not difficult to recognise particles whose diameter does not exceed 0·01 of a micron, and under suitable conditions it is possible to detect others whose diameter is not more than 0·003 of a micron. This appears to be the limit of the range of visibility. Examination shows that the particles of a colloidal solution are in constant movement, being displaced in a highly irregular fashion. Each seems to move independently of its neighbour, like floating particles of dust in a ray of sunlight. Now the cytoplasm of the cells of the posterior root and sympathetic ganglia of mammals and of animals lower in the scale can easily be shown by means of the ultra-microscope to be composed of granules whose volume and density vary with the age and species of the animal. Further, there are slight differences in colour in the living cell, according to the degree of density and to the chemical constitution of these granules. When they are large and dense the cytoplasm as a whole is whitish yellow or yellowish, while if they are very fine it is greyish or greyish blue. On the other hand, Professor Marinesco has not found in living cells any more or less geometrical arrangement into the familiar Nissl's granules or tigroid bodies of the dead, fixed, and stained nerve cell. In the larger nerve cells the colloidal granulations are relatively fine and diffuse; in the smaller cells they are bigger and massed together. Colloidal granules form an integral part of the constitution of nerve cytoplasm, and it may be said that different sorts of nerve cells have differing ultra-microscopic structure which may be compared with the differing pictures obtained in these cells as treated by the usual histological methods. Compression of the living nerve cell shows that it possesses a considerable degree of elasticity and will resume its former shape if the compression has not been too severe or too prolonged. If it has been too severe, then some idea can be gained of the plasticity of the cell; under the latter circumstances there is very often a notable tendency to lobulation, an interesting fact when it is remembered that in certain pathological conditions—e.g., amaurotic family idiocy—the nerve cells are often lobulated. Deformations of this sort show that the consistence of the nerve cell cannot be that of a mere fluid; it rather approximates to the viscosity of a jelly. It is only exceptionally that Professor Marinesco has found, in living nerve cells, any Brownian movements of the particles in their cytoplasm, a fact which suggests that the colloidal constitution of the cells is not that of a colloidal solution, but a colloidal jelly. Any agent which will dilute the cytoplasm, and thereby diminish its viscosity, will at the same time cause Brownian movement of the particles at once to appear. This can readily be done, for instance, with distilled water. It has been already remarked that in

the living nerve cell no agglomerations of particles similar to the Nissl's bodies of the dead cell can be found. If, however, the cell is subjected to the action of certain acids, or to certain coagulating metallic salts, and in particular to various colouring agents, an appearance can be got in every way identical with the familiar tigroid arrangement. Thus, if to a suspension of living nerve cells in the serum of an animal a drop of an aqueous solution, say of toluidin blue, is added, there is an instantaneous precipitation and fixation of Nissl's granules if the cell is killed; if it is still living there is no precipitation. It is impossible by the ultra-microscope to obtain any indication of a neurofibrillar structure in cells. We must not conclude, however, that they do not pre-exist in the cell, and that they are merely a product of coagulation at death. They may be composed of a homogeneous viscous jelly belonging to the class of relatively stable colloids, whose particles are amicroscopic and only become visible under the stress of profound vital alterations. There is much more of note in this article by Professor Marinesco, but what has been said will serve to illustrate the great interest and importance of these researches.

CLIMATIC BUBO.

Staff-Surgeon Dr. G. Rost of the German Navy has contributed to the *Archiv für Schiffs- und Tropen-Hygiene* a paper on this subject, which is notable for its clear and orderly arrangement. He has observed 17 cases—six in the Mediterranean and 11 in the West Indies; of these, seven were right inguinal, five were left inguinal, in four both groins were affected, in one only were the femoral glands enlarged, and those on the left side. The frequency of the disease and its relation to the time spent in different harbours vary much from year to year. The disease has a prolonged period of incubation, perhaps up to seven weeks; the uncertainty about the duration of this latent period makes it difficult to assign cases to particular ports. Clinically the condition is characterised by a gradual swelling of one or more glands, painless at first, as there is no periadenitis to begin with or suppuration. The swelling increases, may get as large as a goose's egg, the several glands remaining still distinguishable. There is now tenderness on pressure, but as yet no pain; there is no suppuration and the skin is not affected. By-and-by comes on periadenitis, with pain and reddening of the skin and a softening of the gland, which is no proof that suppuration has occurred. 80 per cent. of the author's cases had no suppuration. (Surely 17 cases is but a small number from which to draw percentage figures.) The glands along the iliac arteries also enlarge in half the cases. There is little feeling of illness, perhaps no pyrexia. The course of the disease is tedious; it may go on for months, but ultimately the periadenitis is absorbed, and the glands themselves decrease and slowly become inconspicuous again. The treatment is symptomatic: rest, puncture, iodoform injection if suppuration has occurred. X ray exposures are recommended, with precautions. As to differential diagnosis, the ordinary gland inflammations are generally associated with lymphangitis, and pain and pyrexia are present from the start. The glands, too, are themselves less hard. The bubœs of soft chancre are more likely to show periadenitis and to suppurate. Syphilitic gland enlargement is easily discriminated. Three of the author's cases gave negative Wassermann reactions. No visible cause can be assigned for the disease; cases occur from which no micro-organism whatever can be brought to view. As to causation, it only occurs in the groin through which pass the lymphatics from the genital organs. It does not appear in children or in married people, or in those people aboard ship who are, as the writer says, "abstinent," and he concludes it is due to a micro-organism found on the vaginal mucosa of negro women. If this is so the disease should be greatly reduced nowadays in foreign navies by the venereal prophylaxis which is being carried out. The disease is referred to as occurring also in Uganda, East Africa, and China. Perhaps some of the medical officers of the navy serving in the tropics can criticise or extend the suggestive observations of Dr. Rost.

THE VALUE OF HOSPITAL RECORDS.

IN another column we publish an interesting paper by Dr. G. R. Strong on Eight Cases of Osteomyelitis of the Spine. This condition has hitherto been considered a rare one, although it is possible that, like certain other maladies, the recorded cases will be found in some number when attention has been drawn to the disease and the principles of differential diagnosis are pointed out. Osteomyelitis when occurring in the femur or tibia may be mistaken for acute rheumatism, and as the treatment is essentially surgical the error is a serious one. Occurring in the spine, as Dr. Strong suggests, a diagnosis of Pott's disease is likely, or tuberculous disease of the spine may be suspected. One of the cases recorded by Dr. Strong was brought to his notice when acting as house surgeon to Mr. W. G. Spencer, whilst the other seven he found by reference to the post-mortem books at Westminster Hospital, the clinical notes being afterwards consulted. This series of cases demonstrates the value of hospital records. Comparatively few cases of this condition have hitherto been published, yet by referring to one hospital register a series of instances was found. The value of hospital notes naturally depends upon the manner in which they are taken. The records of post-mortem examinations are usually written or dictated by the pathologist, a senior man who has had some experience in expressing in writing what he sees and in making deductions from his findings. Clinical notes, on the other hand, are frequently taken by the dressers in the surgical wards or by the clinical clerks in the medical wards. Although the students have had some instruction in note-taking, nevertheless from want of experience the clinical records thus obtained, unless carefully supervised by the registrars or members of the staff, are frequently almost useless for scientific purposes. It is true that if the house physicians or house surgeons are keen upon their work, their accounts of the cases and of the progress of the disease are often excellent, but if they are responsible for a number of cases their time is so much occupied that they can devote but little attention to note-taking. It behoves the physicians and surgeons of the honorary staff to see that careful and accurate records are made, as otherwise a most valuable source of information and reference will be lost.

CHOLINE IN TARAXACUM ROOT.

AT a recent meeting of the Chemical Society Dr. F. B. Power and Mr. Henry Browning, jun., reported the results of an investigation into the constituents of taraxacum root. Primarily they found two new monohydric alcohols, a tetrahydric alcohol, and a mixture of fatty acids. Apart from the fact that certain of the alcohols found had already been recognised in other plants, they isolated choline. While the investigation was in hand it was reported that some remarkably beneficial results had been obtained in the treatment of several cases of cancer by the use of extract of taraxacum. This was followed by an announcement from Germany that choline had been used with very encouraging results in the treatment of this disease. As is pointed out by the

authors, these two quite independent observations are of interest, especially when considered conjointly, inasmuch as choline has now been shown to be a constituent of taraxacum root. It remains to be decided whether they are a mere coincidence or whether they possess some real pharmacological significance. The direction in which further investigation is needed is obvious. There should be no lack of material, since it it reported that choline can be synthesised by the action of trimethylamine on a strong solution of ethylene oxide: $C_2H_4O + H_2O + N(CH_3)_3 = C_5H_{15}NO_2$.

STATISTICS ON 117,000 AMERICAN PRESCRIPTIONS.

IN June, 1908, the late Dr. Hallberg began to collect statistics on 1,000,000 prescriptions under the direction of the Board of Trustees of the United States Pharmacopœial Convention. He succeeded in collecting the data from 117,000 prescriptions, and some of the results are given in the *Journal of the American Pharmaceutical Association*. The report embraces 122 collections of nearly 1000 prescriptions each, and represents 57 cities and 28 states. The 15 most frequently prescribed drugs, with the number of times they were ordered in each 1000 prescriptions, are as follows:—Nux vomica and strychnine, 67; opium, morphine, and codeine, 64; digestion ferments (pepsin, &c.), 56; quinine and its salts, 40; calomel, 36; sodium bicarbonate, 30; salol, 29; phenacetin, 23; bismuth subnitrate, 22; cascara sagrada, 22; potassium iodide, 19; sodium salicylate, 19; caffeine, 17; arsenic, 16; acetanilid, 12·5. Morphine was less often prescribed than either arsenic, acetanilid, or caffeine. It is probable, however, that morphine, when administered hypodermically, is seldom ordered on prescriptions. The prominent positions occupied by opium and its derivatives, calomel and sodium bicarbonate, testify to the remedial value of these older drugs. Antipyretics are strongly represented in this list of most popular drugs, and of these quinine and its salts are used almost as much as the other named antipyretics together. Practitioners of 25 years ago will look in vain for aloes, jalap, senna, and rhubarb, although calomel still occupies a leading position. It is possible that the popularity of any given drug rests on a somewhat artificial basis. Prior to the "eighties" drugs were prescribed for their known worth by men who had been well trained on the clinical side. With the rise of large pharmaceutical firms it became the custom for them to push the sale of specialities of their own manufacture. In this way preparations of cascara were first exploited by one firm and then imitated by others. It is probable, therefore, that cascara occupies its present prominent position to an aggressive advertising campaign as much as to its inherent value, while the use of senna and rhubarb has fallen away because no manufacturer was specially interested in exploiting them. In some respects this is unfortunate, since it cannot be doubted that practitioners of the old school were able to get satisfactory results from the use of rhubarb, alone and in combination with other drugs.

ENTOMOLOGICAL RESEARCH.

A PAPER[1] has been presented to Parliament, including a report written by Lord Cromer, the chairman of the Entomological Research Committee, giving an account of the stewardship of the committee during the first three years of its existence. Lord Cromer reports that Mr. S. A. Neave has now finished his preliminary survey of the insects in the East African Protectorate, and that Dr. J. J. Simpson, after working in Nigeria and the Gambia, is now employed in classifying the insects of the Gold Coast and Sierra Leone. Entomological material is now being received from 50 collectors in tropical Africa, so that some 100,000 specimens have already arrived in London, including much material new to science. Gratitude is expressed to Mr. A. Carnegie, who kindly agreed for three years to defray the expenses of three young men to be trained in the United States under Dr. L. O. Howard of Washington in order that they may eventually carry out entomological work in Africa. The committee are now in receipt of £1300 a year contributed by various colonies, besides £1000 a year from the Imperial Government; they now ask to have their income doubled in order to organise a system for the identification of all injurious insects in the British Empire, and in order to publish a monthly periodical dealing with agricultural pests and disease carriers, in addition to compiling a card index for the literature dealing with such pests. Mr. L. Harcourt, in acknowledging the receipt of the report, points out the value to human life which our increased knowledge of insects has brought about. In the year 1896 the death-rate among the European officials in the West African colonies was 90 per 1000, and in the year 1911 the mortality had fallen to 14 per 1000. "These are remarkable figures, and no small part of the decrease of mortality must be attributed to the introduction of protective measures against disease-bearing insects." An appendix to the report gives a lecture delivered in March, 1911, being the first of a series initiated at the Imperial College of Science and Technology by Mr. H. M. Lefroy, who has had 11 years' experience as a Government entomologist in the West Indies and India. The development of fresh countries in the tropics, increasing competition in the cultivation of products of the tropics, the well-known discoveries of the part played by insects in disseminating human and animal diseases, have now brought the science of entomology to the forefront, and have proved that this science is necessary to man if we are to be in a position to populate tropical areas successfully, to cope with disease, and to get a fair return from agricultural outlay. In England there is no Government entomologist, no station for experiments on insects, and no organisation which does for the British empire what economic entomologists do in India, in our colonies, and in the United States. The potato moth, which used to do so much damage in India and Australia, has been checked by simple means which are within the reach of the cultivator, while the phylloxera of the vine and the woolly aphis of the apple have been counteracted by the introduction of resistant stocks, on which these pests will not live. Surely, there are similar pests in Great Britain of which the farmer would be grateful for increased knowledge. To attack the enemy the first thing which is wanted is an intelligence department and some simple literature. We can do nothing until we study our domestic insects and discover how they live, where they lay their eggs, and every detail of the life of the grub from beginning to end. The children in our elementary schools are taught some facts connected with natural history, and in every London County Council school may be seen pictures of foreign animals, such as elephants, lions, and the giraffe. But there is no one to teach the rising generation anything about the pests by which the child in a dirty home may be attacked almost every day or night in the summer weather. What education is given to children on the habits of the domestic fly, which may convey typhoid fever and diarrhœa, and what intelligent information is given about the life habits of the flea, which may convey plague, or of bed bugs and lice, both of which have been incriminated as carriers of typhus and relapsing fever? It

[1] Correspondence relating to the Development of Entomological Research in the British Colonies and Protectorates (Cd. 6429), London, November, 1912. Price 2½d.

is to be hoped that the Entomological Research Committee over which Lord Cromer presides may some day provide us with material from which a school primer could be compiled.

THE King has sanctioned the appointment of Major Arthur W. Mayo-Robson, C.V.O., R.A.M.C. (T.F.), as Knight of Grace of the Order of the Hospital of St. John of Jerusalem in England, and the promotion of Mr. William Disbrow Brydone-Jack and Dr. Thomas Nelson from Honorary Associates to Esquires of the Order.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In the 95 largest English towns, with an aggregate population estimated at 17,639,881 persons at the middle of this year, 7535 births and 4917 deaths were registered during the week ended Saturday, Nov. 30th. The annual rate of mortality in these towns, which had been 14·8, 14·1, and 15·0 per 1000 in the three preceding weeks, declined to 14·5 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these large towns averaged 14·0 per 1000, against 14·7 in London during the same period. The death-rates in the several towns last week ranged from 5·4 in Hornsey and in Enfield, 5·5 in Wimbledon, 6·0 in Barnsley, and 6·3 in Wallasey, to 20·2 in West Ham, 20·5 in Liverpool, 21·8 in St. Helens, 25·7 in South Shields, and 28·2 in Aberdare.

The 4917 deaths from all causes in the 95 towns were 174 fewer than the number in the previous week, and included 501 which were referred to the principal epidemic diseases, against numbers rising from 421 to 552 in the five preceding weeks. Of these 501 deaths, 308 resulted from measles, 72 from infantile diarrhœal diseases, 43 from diphtheria, 35 from whooping-cough, 32 from scarlet fever, and 11 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·5 per 1000, against 1·5 and 1·6 in the two previous weeks. The deaths attributed to measles, which had been 296, 293, and 334 in the three preceding weeks, declined to 308 last week, and caused the highest annual death-rates of 2·5 in Merthyr Tydfil, 2·7 in Lincoln, 2·8 in Birmingham and in Coventry, 3·0 in Stockton-on-Tees, 3·2 in St. Helens and in Barrow-in-Furness, 3·3 in West Hartlepool, 3·4 in West Ham, 3·9 in Newcastle-on-Tyne, 4·4 in Preston, and 4·9 in Middlesbrough. The deaths of infants under 2 years of age referred to diarrhœa and enteritis, which had been 82, 85, and 86 in the three preceding weeks, declined to 72 last week, and included 23 in London and its suburban districts, 6 in Liverpool, 4 in Manchester, 3 in Sheffield, 3 in Hull, and 3 in Rhondda. The fatal cases of diphtheria, which had been 52, 52 and 41 in the three preceding weeks, were 43 last week; 8 deaths were registered in London, 7 in Birmingham, 5 in Liverpool, and 3 in Portsmouth. The deaths attributed to whooping-cough, which had increased from 30 to 49 in the three preceding weeks, declined to 35 last week, and included 11 deaths in London, 5 in Stoke-on-Trent, 3 in Manchester, and 2 in Lincoln. The deaths referred to scarlet fever, which had declined from 32 to 25 in the three preceding weeks, rose to 32 last week; of this number 10 were recorded in Birmingham, 3 in London, 3 in Aberdare, and 2 in Liverpool. The fatal cases of enteric fever, which had been 18, 14, and 17 in the three preceding weeks, fell to 11 last week, 2 of which were registered in Hull.

The number of scarlet fever patients in the Metropolitan Asylums and in the London Fever Hospital, which had been 2350, 2335, and 2336 at the end of the three preceding weeks, had declined to 2279 on Saturday last; 270 new cases of this disease were admitted to these institutions during the week, against 326, 254, and 296 in the three preceding weeks. These hospitals also contained on Saturday last 921 cases of diphtheria, 779 of measles, 225 of whooping-cough, and 43 of enteric fever, but not one of small-pox. The 1259 deaths from all causes in London were 95 fewer than the number in the previous week, and were equal to an annual death-rate of 14·5 per 1000. The deaths referred to diseases of the respiratory system, which had been 226, 243, and 283 in the three preceding weeks, further rose to 288 last week, but were 9 below the number recorded in the corresponding week of last year.

Of the 4917 deaths from all causes in the 95 towns last week, 195 resulted from different forms of violence and 433 were the subject of coroners' inquests. The causes of 42, or 0·9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and in its 14 suburban districts, in Manchester, Sheffield, Leeds, Bristol, Bradford, Hull, Newcastle-on-Tyne, and in 51 other smaller towns. The 42 uncertified causes of death last week included 13 in Birmingham, 4 in Gateshead, 3 in Stoke-on-Trent, 3 in Blackburn, and 2 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In the 18 largest Scotch towns, with an aggregate population estimated at 2,182,400 persons at the middle of this year, 985 births and 715 deaths were registered during the week ending Saturday, Nov. 30th. The annual rate of mortality in these towns, which had been 15·4, 16·3, and 18·0 per 1000 in the three preceding weeks, declined to 17·1 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 15·2 per 1000, against 14·0 in the 95 large English towns during the same period. Among the several Scotch towns the death-rates last week ranged from 6·5 in Kirkcaldy, 9·3 in Hamilton, and 10·3 in Clydebank, to 19·9 in Greenock, 20·5 in Glasgow, and 21·3 in Coatbridge.

The 715 deaths from all causes in the 18 Scotch towns were 38 fewer than the number in the previous week, and included 37 which were referred to the principal epidemic diseases, against 37 and 48 in the two preceding weeks. Of these 37 deaths, 14 resulted from infantile diarrhœal diseases, 8 from diphtheria, 7 from whooping-cough, 4 from scarlet fever, 3 from measles, and 1 from enteric fever, but not one from small-pox. These 37 deaths from the principal epidemic diseases were equal to an annual death-rate of 0·9 per 1000, against 1·5 per 1000 in the 95 large English towns. The deaths of infants under two years of age attributed to diarrhœa and enteritis, which had been 12, 10, and 11 in the three preceding weeks, rose to 14 last week, and included 4 in Glasgow, 2 in Dundee, and 2 in Aberdeen. The deaths referred to diphtheria, which had been 8, 6, and 10 in the three preceding weeks, were 8 last week, and comprised 5 in Glasgow, 2 in Perth, and 1 in Govan. The fatal cases of whooping-cough, which had increased from 8 to 15 in the three preceding weeks, declined to 7 last week, 5 of which were recorded in Glasgow. The 4 deaths attributed to scarlet fever last week were equal to the average in the three preceding weeks. The 3 deaths referred to measles occurred in Glasgow and the fatal case of enteric fever in Aberdeen.

The deaths referred to diseases of the respiratory system in the 18 Scotch towns, which had been 127, 162, and 195 in the three preceding weeks, declined to 178 last week; 24 deaths were attributed to different forms of violence, against 19 and 27 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an aggregate population estimated at 1,154,150 persons at the middle of this year, 498 births and 437 deaths were registered during the week ending Saturday, Nov. 30th. The annual rate of mortality in these towns, which had been 17·9, 17·0, and 18·5 per 1000 in the three preceding weeks, further rose to 19·7 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these Irish towns averaged 17·6 per 1000; in the 95 large English towns the corresponding death-rate did not exceed 14·0, while in the 18 Scotch towns it was equal to 15·2 per 1000. The annual death-rate in the several towns last week was equal to 18·9 in Dublin (against 14·5 in London), 18·5 in Belfast, 18·4 in Cork, 19·1 in Londonderry, 27·1 in Limerick, and 32·3 in Waterford, while in the remaining 16 smaller towns the mean rate was equal to 21·7 per 1000.

The 437 deaths from all causes in the 22 Irish towns

were 28 in excess of the number in the previous week, and included 51 which were referred to the principal epidemic diseases, against 40 and 45 in the two preceding weeks. Of these 51 deaths, 29 resulted from measles, 12 from diarrhœal diseases, 3 from diphtheria, 3 from enteric fever, 2 from scarlet fever, 1 from whooping-cough, and 1 from typhus, but not one from small-pox. These 51 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·3 per 1000; the death-rate from these diseases in the 95 large English towns last week was equal to 1·5, while in the 18 Scotch towns it did not exceed 0·9 per 1000. The deaths attributed to measles, which had been 23, 23, and 24 in the three preceding weeks, rose to 29 last week, and comprised 15 in Belfast, 7 in Dundalk, 3 in Dublin, 3 in Limerick, and 1 in Tralee. The deaths referred to diarrhœal diseases, which had increased from 5 to 12 in the three preceding weeks, were again 12 last week, and included 9 of infants under two years of age; 6 deaths occurred in Belfast, and 2 in Dublin. The 3 fatal cases of diphtheria last week, 2 of which were registered in Belfast and 1 in Londonderry, were equal to the average in the three preceding weeks. Of the 3 deaths attributed to enteric fever 2 occurred in Dublin and 1 in Galway; the 2 deaths referred to scarlet fever were registered in Dublin and Cork respectively. The fatal case of whooping-cough was recorded in Drogheda, and that of typhus in Dublin.

The deaths referred to diseases of the respiratory system, which had been 93, 83, and 91 in the three preceding weeks, declined to 84 in the week under notice. Of the 437 deaths from all causes, 126, or 29 per cent., occurred in public institutions, and 5 resulted from different forms of violence. The causes of 20, or 4·6 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 95 large English towns the proportion of uncertified causes of death last week did not exceed 0·9 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Staff-Surgeon: H. L. Norris to the *Chatham*, on commissioning. Surgeons: J. M. Hayes to the *Excellent;* C. M. R. Thatcher to the *Venus;* J. A. O'Flynn, A. R. Price, and G. V. Hobbs to the *Vivid*, additional, for disposal; and F. J. D. Twigg, G. E. D. Ellis, and F. J. Burke to the *Pembroke*, additional, for disposal.

ROYAL NAVAL VOLUNTEER RESERVE.

The following has been appointed Surgeon: Wilfrid Harry Bleaden.

ROYAL ARMY MEDICAL CORPS.

Major Bernard Forde to be Lieutenant-Colonel, vice G. E. Hale, D.S.O., retired (dated Nov. 23rd, 1912).

The undermentioned Captains to be Majors (dated Nov. 29th, 1912): Arthur W. Gibson, Rochford N. Hunt, Henry E. J. A. Howley, Ralph F. M. Fawcett, and John L. Jones.

Lieutenant-Colonel E. G. Browne has been selected for appointment as Officiating Assistant Director of Medical Services to the First (Peshawar) Division of the Northern Army in India, in succession to Lieutenant-Colonel A. E. Tate, transferred to the Allahabad Brigade as Assistant Director of Medical Services. Lieutenant-Colonel R. J. Windle has embarked for a tour of service in India with the Sixth (Poona) Division of the Southern Army. Lieutenant-Colonel J. S. Donaldson has taken up duty at Rawal Pindi Cantonment in charge of the Military Hospital. Lieutenant-Colonel G. F. H. Marks has been appointed to hold charge of the Military Hospital at Ferozopore. Lieutenant-Colonel H. C. Thurston has taken up duty as Surgeon to the Royal Military College at Sandhurst. Lieutenant-Colonel C. A. Young has been appointed Deputy Assistant Director of Medical Services to the Welsh Division of the Territorial Force at Shrewsbury.

Major G. J. Buchanan, at present serving at the Military Hospital, Agra, has been selected for appointment as Senior Medical Officer on board the transport s.s. *Rewa*, leaving Bombay for Southampton on Dec. 12th. Major W. E. Hardy, medical officer at the Guards Depôt, Caterham, has embarked for a tour of service in India with the Eighth (Lucknow) Division of the Southern Army. Major H. K. Palmer has taken up duty at Aden on transfer from Belgaum, Madras Presidency, and has been appointed to hold charge at the Section Hospital and Staff-Surgeon at the Crater. Major H. H. Norman, on return home from India, has been appointed for duty at the Royal Herbert Hospital, Woolwich. Major B. B. Burke has taken over charge of the Military Hospital at Mount Auriol, Sierra Leone Protectorate. Major H. W. Grattan has joined at Naini Tal and taken over charge of the Convalescent Enteric Fever Depôt. Major R. S. H. Fuhr has been transferred from the Royal Herbert Hospital at Woolwich to the Military Hospital at Colchester for general duty. Major J. P. J. Murphy has been appointed Specialist Sanitary Officer at Cape Town. Major C. S. Smith has taken up duty in charge of the Cantonment General Hospital and Dispensary at Dum Dum. Major J. F. Whelan has been appointed a Specialist in the Prevention of Disease and placed in charge of the Bacteriological Research Laboratory at Brigade Headquarters, Jhansi.

Captain A. C. Elliot has been granted six months' general leave of absence home from India. Captain F. Forrest has been directed to join the Irish Command, and will be appointed to the Dublin District for duty. Captain M. D. Ahern has been detailed for a tour of service in Bermuda. Captain J. A. Clarke has been transferred from the Military Hospital at Cairo to Khartoum for duty. Captain G. B. F. Churchill has arrived home from India for duty, tour expired. Captain W. C. Smales has been appointed to the Southern Command on transfer to the Home Establishment from India. Captain E. Gibbon has arrived home on leave of absence from Egypt. Captain L. A. A. Andrews and Captain V. T. Carruthers have been transferred from Belfast and Queenstown respectively to the London District for the promotion courses to the rank of Major at the Royal Army Medical College, Millbank. Captain C. M. Rigby has taken up duty at the Military Hospital, Bombay, on transfer from Jubbulpore Cantonment. Captain S. S. Dykes has been granted 60 days' privilege leave of absence from duty at the Military Hospital, Dinapore. Captain E. M. O'Neill has arrived home for duty, tour expired, from India. Captain A. S. Williams and Captain F. D. G. Howell, serving at Khanspur and Lahore respectively, have been appointed Medical Officers on board the transport s.s. *Hardinge*, which left Karachi for Southampton on Nov. 30th. Captain N. Dunbar Walker, specialist in physical training at the Royal Army Medical College, Millbank, has been placed under orders for a tour of service in India, and on arrival will be appointed for duty in the Fourth (Quetta) Division of the Southern Army. Captain D. B. McGrigor, specialist in electrical science, has arrived home on leave of absence from the Military Hospital at Meerut Cantonment. Captain J. J. O'Keefe has joined the Military Hospital at Roorkee for duty. Captain T. C. Lucas has taken up duty at Bombay as surgeon to H.E. the Governor of Bombay. Captain C. W. O'Brien has been appointed to hold charge of the Military Hospital at Kilbride. Captain A. H. Jacob, on return from a tour of service at Rawal Pindi, has been appointed for duty in the Dublin District. Captain A. C. Vidal has been transferred from the Military Hospital at Bloemfontein to Wynberg. Captain S. McK. Saunders has arrived home on leave of absence from Egypt.

Lieutenant J. K. Gaunt has embarked for a tour of service in Malta. Lieutenant T. W. Stallybrass has been seconded for appointment with the Egyptian Army. Lieutenant W. T. Graham has taken over medical charge of the troops at Durrington. Lieutenant H. G. Monteith has embarked for a tour of service in South China. Lieutenant T. E. Osmond has joined the London District for duty. Lieutenant E. L. Fyffe has left Cork for service in India. Lieutenant J. H. M. Frobisher has joined the Military Hospital at York for duty.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel J. M. Crawford has taken up the appointment of Civil Surgeon at Benares on completion of special duty at the Central Research Institute of India at Kasauli. Lieutenant-Colonel C. R. M. Green has been selected for the advanced rate of pay under Article 7 of the Royal Warrant for Promotion of March 13th, 1908, in succession to Lieutenant-Colonel W. A. Sykes, who has

retired. Lieutenant-Colonel D. H. Graves has arrived home on leave of absence from India.

Major Jay Gould has been selected for special duty in the office of the Director-General of the Indian Medical Service at Simla. Major C. E. Williams has been granted three months' extension of his leave of absence home from India. Major E. F. Gordon Tucker has been appointed to the medical charge of the Byculla Schools in Bombay. Major G. Hutcheson, civil surgeon at Aligarh, has taken over medical charge of the Bulandshahr district during the absence of Major R. Steen. Major J. C. S. Oxley, on return from leave, has been appointed Civil Surgeon at Chanda. Major C. F. Weinman, at present officiating as civil surgeon at Dinajpur, has been granted study leave and combined leave of absence home for two years. Major F. S. C. Thompson, officiating superintendent of the Central Jail at Alipore, has been appointed to act until further orders as Superintendent of the Juvenile Jail, Alipore, during the absence on deputation of Lieutenant M. Galvin. H.E. the Governor of Bombay in Council has been pleased to select Major V. B. Bennett to officiate as a Civil Surgeon of the First Class in succession to Lieutenant-Colonel B. B. Grayfoot, who has been transferred to Karachi as Assistant-Director of Medical Services under the orders of H.E. the Commander-in-Chief in India. Major W. J. Niblock has arrived home on leave of absence from India. Major N. R. J. Rainier, civil surgeon of the Second Class, has taken up duty as Civil Surgeon of the First Class during the absence on combined leave of Major P. F. Chapman.

Captain W. G. Hamilton, superintendent of the Central Jail at Midnapore, on return from leave has been selected for appointment as Superintendent of the Central Jail at Dacca. The services of Captain A. T. Pridham have been placed temporarily at the disposal of the Government of Burma for employment in the Jail Department of that Province. Captain A. G. Coullie has been selected by H.E. the Commander-in-Chief in India for appointment as Specialist in Advanced Operative Surgery to the Fifth (Mhow) Division. Captain A. Cameron has been appointed for duty at Rai Bareli as Officiating Civil Surgeon on completion of special duty at the Central Research Institute of India at Kasauli. Captain R. F. Steel has been granted furlough combined with study leave of absence home from India for a total period of two years. The services of Captain O. A. R. Berkeley Hill have been placed temporarily at the disposal of the Government of Madras for employment in the Sanitary Department. Captain H. W. Pierpoint, at present officiating as a second-class agency surgeon in the North-West Provinces, has been appointed Civil Surgeon at Peshawar. Captain R. L. Gauden has been granted six months' extension of leave of absence home from India on medical certificate. Captain H. B. Scott, at present officiating as port health officer at Rangoon, has been appointed to officiate as Police Surgeon and Pathologist to the Rangoon General Hospital in place of Captain H. A. Dougan, deceased. Captain E. J. C. McDonald has been appointed temporarily as Civil Surgeon on the Dibrugarh Frontier. Captain N. G. C. McVean, officiating Second-class Agency Surgeon, has been granted furlough combined with privilege leave of absence home from India for a total period of eight months. The service of Captain R. Markham Carter have been placed temporarily at the disposal of the Government of Bombay by the Home Department of the Government of India. Captain R. S. Kennedy has been transferred from the Military to the Civil Department for employment as Medical Officer of the Abor Survey party.

Lieutenant V. P. Norman has been granted three months' leave of absence on medical certificate.

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd East Anglian Field Ambulance, Royal Army Medical Corps: William Brander to be Lieutenant (dated Oct. 22nd, 1912).

2nd Highland Field Ambulance, Royal Army Medical Corps: Captain Lewis D. Cruickshank resigns his commission (dated Dec. 4th, 1912).

1st Wessex Field Ambulance, Royal Army Medical Corps: Captain Leonard R. Tosswill resigns his commission (dated Dec. 4th, 1912).

5th Northern General Hospital, Royal Army Medical Corps: Lieutenant William Isaac Cumberlidge, from the 2nd North Midland Field Ambulance, Royal Army Medical Corps, to be Captain, whose services will be available on mobilisation (dated Dec. 4th, 1912).

1st London (City of London) Sanitary Company, Royal Army Medical Corps: Captain Arthur R. Owst resigns his commission (dated Dec. 4th, 1912).

Attached to Units other than Medical Units.—Major John Rowan resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated Dec. 4th, 1912). Lieutenant Percival T. Rutherford resigns his commission (dated Dec. 4th, 1912).

DEATHS IN THE SERVICES.

Surgeon-Colonel Henry Martineau Greenhow, at Esher, on Nov. 26th, in his 84th year. He was one of the original garrison in the siege of Lucknow during the Indian Mutiny, and on the night of Havelock's relief he rode out and brought safely into the garrison several soldiers of the relieving force, who, badly wounded and unable to move, were lying completely exposed to the enemy's fire (strongly recommended for the V.C., which was withheld in consequence of technical difficulties; twice mentioned in despatches, medal and two clasps). He was one of four assistant surgeons, including the late Sir Joseph Fayrer, who were promoted to be brevet surgeons "in consideration of their services during the siege of Lucknow."

Lieutenant-Colonel Edward Alfred Birch, late Bengal Medical Service, on Nov. 27th. From 1861 to 1865 he was an assistant surgeon in the Royal Navy, and was present at the actions of Kagosima and Simonoseki (mentioned in despatches). He entered the Indian Medical Service in 1866, and was on duty through the great Behar famine of 1874. At the beginning of 1885 he was appointed Surgeon-Superintendent of the Presidency General Hospital, Calcutta, and later was selected to be Principal and Professor of Medicine at the Medical College there. He was appointed temporary Inspector-General of Hospitals in Bengal in November, 1892, and retired in the following year.

THE JAPANESE NAVY.

The annual report of the health of the Imperial Japanese Navy for the year 1909, which has just reached us, shows that the health of the personnel is satisfactory. The number of patients suffering from disease or injury, as well as the number of days' sickness during the year, indicates a decrease as compared with the preceding year and the average of the last 12 years. In the August issue of the Bulletin of the Naval Medical Association of Japan there are articles by Fleet-Surgeons J. Suzuki, T. Tashiro, and S. Tachikawa, Staff-Surgeon Y. Kato, and Surgeons M. Hashimoto, K. Kamo, T. Kabeshima, and U. Ushijima. These are all published in the Japanese characters, but there are paragraph summaries in English. The subjects dealt with include Syphilitic Retinitis, the Reverse of the Homologous and Heterogeneous Agglutination Reaction in the Serum of Paratyphoid B Patients Inoculated with Typhoid Vaccine, Dry Treatment after Skin-grafting by the Thiersch Method, and the Examination of Tubercle Bacilli in Blood.

THE CARE OF EPILEPTICS: GIFT BY THE DAVID LEWIS TRUST, MANCHESTER.—The annual meeting of supporters of the David Lewis Manchester Epileptic Colony was held on Nov. 29th. At the commencement of the year the number of colonists was 260, at the end 264, consisting of adult males 127, adult females 130, and boys 7. Many applicants are still waiting for admission; indeed, the applications have been so numerous that recent additions to the colony have cost £10,000, and a part of this cost has was defrayed last year out of income. The director of the colony, Dr. Alan McDougall, pointed out to the meeting that the progress of an epileptic was not to be judged solely, nor even chiefly, by the frequency of his fits. Though continuing to have fits the great majority of the colonists had been much improved both mentally and physically. A few had continued to degenerate, and of these some had been sent away. The David Lewis Trust had intimated its intention to transfer as a gift to the colony the Sandlebridge Farm land—63 acres—and the buildings thereon, at present rented from the trustees.

Correspondence.

"Audi alteram partem."

THE HISTOLOGY OF EXPERIMENTAL RHEUMATISM.

To the Editor of THE LANCET.

SIR,—I think it well that the letters by Dr. M. H. Gordon and myself were written, for they have not only brought forward the fact that he places great reliance on his neutral red broth medium, but also that I have really misinterpreted the language he used. I unhesitatingly accept his statement, and if I have said anything which might seem offensive to Dr. Gordon, I also apologise. Dr. Yates and I welcome any criticism. It may be that there is some error in our work, and we shall be the first to admit it when Dr. Gordon or any other worker produces satisfactory evidence. In regard to the neutral red broth, we made no mention of it in our published results, but this was not because we had not used it, but because we found the results so erratic and so unreliable that we considered the test of no value, and the use of it merely made our results more confusing. In view of Dr. Gordon's statements, I shall certainly repeat the experiments with a series of streptococci, but I confess that I do not think the use of the three strains—S. pyogenes, S. salivarius, S. fæcalis—sufficient on which to pronounce a judgment. In our experiments the pathogenicity was tested by intravenous injection in rabbits.

With Miller and Coombs I agree that the important point at issue is—Has sufficient evidence been brought forward to establish a definite connexion between acute rheumatism and a steptococcus (I object to the name "rheumococcus") such as that isolated by Poynton and Paine, myself, and others? Once this point is established, and I think the evidence in its favour is extremely strong, then the question as to whether this is a specific organism or whether it is one of the normal inhabitants of the alimentary tract is a matter which will be very easily settled. Dr. Anderson's observation is of very great interest, and is quite confirmatory of experimental work which Dr. Yates and I have lately been doing, and which we hope to publish shortly.

I am, Sir, yours faithfully,

University of Liverpool, Nov. 30th, 1912. J. M. BEATTIE.

To the Editor of THE LANCET.

SIR,—I accept most willingly and with cordiality the withdrawal and apology published by Dr. M. H. Gordon in your issue of Nov. 30th. In offering that *amende* Dr. Gordon does just what everyone who knows him would have expected him to do as soon as his attention was directed to the interpretation necessarily placed upon the expressions which he had employed. There now fortunately only remains between us the purely abstract difference of opinion which exists regarding the true meaning of results obtained by the application of his streptococcal tests. If I understand Dr. Gordon's letter of Nov. 30th rightly, he no longer maintains at the present time that the reactions yielded by any given strain of streptococcus in the test media remain stable and constant on continued subculture either in artificial media or through the bodies of living animals. He now merely claims that when first isolated from the human body different strains of streptococci yield different series of reactions in the tests, and that, if they be separated into groups or classes by means of these differences, some groups will be found to differ greatly from others in their pathogenicity for small animals such as rabbits and mice. This is a statement with which I do not think it likely that any one would wish to disagree.

But since the reactions, like the virulence, are inconstant and variable when examined over a sufficient period of time, they do not, in my judgment, indicate any fixed or permanent differences in these streptococcal groups. A given streptococcus may be found to fall now into one group, now into another when submitted to the tests at different times. And the case is not accurately comparable with the examples of loss of characters on subcultivation quoted by Dr. Gordon, since here we have to do with gains as well as losses of particular reactions—in fact, with an interchange of characters between different strains of streptococci kept under continued rigorous examination. The tests, therefore, fail (as it seems to me) to constitute an adequate basis for the classification of these micro-organisms. This is the reason why, like Dr. Carey Coombs, Dr. R. Miller, and Dr. E. H. Kettle in their recent important investigation, I found myself unable to employ the tests satisfactorily for the differentiation of streptococci. Shortly after the tests were published by Dr. Gordon I was led to interest myself in them by the fact that I was still engaged in attempting to distinguish from other streptococci that coccus which, following Triboulet and Poynton and Paine, I found in cases of acute rheumatism. This, however, I was unable to do by the tests any more than by the formic acid production which Ryffel and I had previously investigated, but which, though very striking, proved eventually to be only a quantitative, not a qualitative, difference between the streptococci out of rheumatism and ordinary pyogenetic strains.

Because the bio-chemical activities of streptococci as exhibited in the test media are variable, and because the variations appear to be influenced largely by environment, the reactions may, perhaps, give a useful indication regarding the source of particular strains (e.g., saliva or fæces); though, as Houston pointed out in relation to fæcal streptococci, "unfortunately with so many groups to select from a particular streptococcus ..... derived from a non-fæcal source could hardly fail to fall under one or other of the 40 groups of fæcal streptococci." Further, since low pathogenicity seems to be very frequently associated with certain phases of the bio-chemical activities examined in the tests, and high pathogenicity with other phases, the tests may afford some guide to probable pathogenicity and virulence. But in this connexion it must be remembered that before a given streptococcus can be isolated, plated out, obtained in absolute purity of strain, subcultivated, and submitted to three days of testing, time will have elapsed. Hence, in cases where it is of urgency and importance to get definite evidence regarding the virulence of an existing streptococcal infection, this method of examination seems, if I may say so, to go rather a long way round to obtain what at best can be no more than a probable answer to questions which can be answered rapidly, precisely, and with certainty by the inoculation of small animals such as mice.

I am, Sir, yours faithfully,

E. W. AINLEY WALKER.

University College, Oxford, Dec. 2nd, 1912.

WEIGHTS AND MEASURES, ANCIENT AND MODERN.

To the Editor of THE LANCET.

SIR,—In the review of "Men and Measures" given in THE LANCET of Nov. 23rd I was much pleased to find general approbation of my work; but in the dissent from my defence of the imperial system of weights and measures there is one sentence which, I think, gives an erroneous impression of one series of our measures, and inferentially of the whole system. It is this: "Consider, again, the wide margin of error in geographical measures when they begin at a barleycorn, three of which make an inch, and increase upward to a league." I quoted these units as a matter of history from an old treatise, and my opinion of the series was certainly not favourable. For, after giving examples of such series, and relating how tradition represents a Scots king ordering the mean breadth of three men's thumbs to be taken as the standard of the inch, I expressly said (p. 60) that "no more in Scotland than in England or elsewhere has the inch been anything but a division of the foot." In all countries, whether of the imperial or of the metric system, there are two standards of length: for land, the mile and the kilometre, multiples of the yard and of the metre; for sea, always the meridian mile, accurately measured many centuries before the Christian era and divided by the ancients into 1000 fathoms of 6 feet, the foot being = 12·18 of our inches. Never has any linear measure, geographical or other, been derived from inches, or from barleycorns, hairbreadths, or other small objects. In most countries there will be found some story about

the length of some famous king's arm, or of his foot, or of barleycorns, having been taken as the basis of linear measure, or of so many wheatcorns as the basis of weights. This is fable, arising out of mixing up familiar measures of limb lengths or of seeds with the legal measures. The very familiarity of such rough measures led them, indeed, to be mentioned, as in Royal orders that a silver penny weighed 32 wheatcorns in the midst of the ear. This was fiction; the moneyers were ordered to coin so many pennies from the mint-pound of silver; and when the king's financial necessities induced him to increase the yield of pence from the mint-pound of silver they continued nominally to weigh the same number of wheatcorns.

To the erroneous saying of Ambroise Paré, "that every weight arose from some beginning or element; for as our bodies arise from the four first simple or elementary bodies, so all weights arise from the grain," I opposed (p. 249) the "counsel" quoted by John Greaves, professor of astronomy at Oxford in 1657, "advising such as will examine measures and weights to begin with the greater and not with the lesser." Thus while we may say that a pound is 7000 grains, yet, speaking accurately, it is divided into 7000 parts called grains. Historically our pound was 16 Egypto-Roman ounces, of which 1000 are the weight of a cubic foot of water, and that as accurately as 1000 grammes are the weight of a cubic decimetre of water. Here we have the basis of a decimal series of corresponding weights and measures: 10 ounces of water being a half-pint, 100 ounces = 5 pints, 1000 ounces or 50 pints being a cubic foot. It is not generally known that we have in our system several alternate decimal series, as in land-measure, in cubic measurement, and in weight from the 7-grain septem to the 10 lb. gallon, to the 100 lb. cental and to the colonial and American short ton of 2000 lb. Unfortunately these decimal series are little known; there is no official statement of the imperial system; all attention has been given to the metric system, and little or none to the decimal capabilities and progressiveness of our own system. However, there are signs of a movement towards a juster appreciation of the imperial system; indeed, it is probable that in at least one almanack for 1913 there will be found a correct account of our weights and measures.

I am, Sir, yours faithfully,

Cros de Cagnes, near Nice, Nov. 30th, 1912. EDWARD NICHOLSON, Surgeon-Lieutenant-Colonel, A.M.D.

THE OCCURRENCE OF THE COLON BACILLUS IN THE BLOOD.

To the Editor of THE LANCET.

SIR,—I was interested in the note by Dr. P. N. Panton and Dr. H. L. Tidy on this subject in THE LANCET of Nov. 30th, in which, remarking upon the rarity with which the colon bacillus is found in the blood during life, they state that they are unacquainted with any publication in English literature in which the bacillus is claimed to have been obtained from the blood stream. In an article on vaccine treatment which appeared in the *Birmingham Medical Review*, 1908, I recorded a case of typhoid fever, seen the previous year, in which the colon bacillus was obtained from the blood. The patient, a man aged 37, after a rather irregular course of five weeks, during which thrombosis of the veins of the right arm occurred, had a severe rigor, the temperature rising to 106° F. Blood cultures on the following day gave a pure growth of bacillus coli, the cultural reactions being typical. An autogenous vaccine was prepared, and after two injections the temperature fell to normal and the patient made a good recovery. Rigors are not common in typhoid fever, and I had previously suspected that they were caused by a secondary infection with bacillus coli, but in a previous case no growth was obtained from the blood. This case is also interesting as being one of the earliest cases of septicæmia treated by vaccines. This, together with another case of B. coli septicæmia, is again recorded in an article on the vaccine treatment of septicæmia in the *Journal of Vaccine Therapy*, September, 1912. The history of the second case is interesting. In May, 1911, a lady, aged 44, went a sea voyage to Morocco. On May 29th, after leaving Lisbon, 120 persons on board suffered from severe diarrhœa and vomiting lasting a few days. No food was eaten at Lisbon and none taken on board. For two days the patient had much abdominal pain and vomiting, with severe prostration and aching head and limbs. Her temperature was then 103° to 104° F. After two days intense diarrhœa began with from 6 to 12 movements a day. She was brought home on June 12th. Temperature was then irregular, there was much abdominal distension, but the diarrhœa and pain were less. She was in a dazed, apathetic, and depressed condition. The blood did not agglutinate typhoid or paratyphoid bacilli, but blood cultures gave a pure growth of B. coli, and the same organism was obtained from the urine. The case yielded to vaccine treatment and the patient entirely recovered. A feature of both cases was the aching and tenderness of the limbs combined with muscular prostration, symptoms which I have noted in other severe cases of B. coli infection.

In many cases of infection with B. coli blood cultures are not taken, as the organism can readily be obtained from other sources, such as the urine; but I have little doubt that the organism would be found more frequently if the blood were examined in severe cases and a favourable time were chosen. In all cases of septicæmia it is advisable to take the blood only at a time when the temperature is rising rapidly, and especially during a rigor if this occurs. This is true of streptococcic as well as B. coli infections.

Many cases have now been recorded in which B. coli was obtained from the blood. In 1894 Hanot showed its presence in the blood taken during life in acute cases of icterus gravis. In 1909 Jacob collected 39 cases and in 1910 Draper 43 cases. Gibson and Douglas isolated B. coli from the blood in a case of methæmoglobinæmia, and it has frequently been found in terminal infections. Several cases of infective endocarditis due to B. coli have also been recorded.

I am, Sir, yours faithfully,

Birmingham, Dec. 1st, 1912. WILLIAM H. WYNN.

A SIMPLE METHOD OF CLEANING CAPILLARY TUBES AND BLOOD PIPETTES.

To the Editor of THE LANCET.

SIR,—There is a constant difficulty in hospitals and in laboratories, where many people are using capillary tubes, in ensuring that these are always cleaned directly after use, and nothing is more common than to find some desiccated blood and other material blocking a tube; and it is most difficult to get them clean by the use of wires and other means generally adopted. If, however, a few drops of antiformin be sucked up, it will quickly disintegrate any organic material left behind, and the tubes will be as spotlessly clean as when new. The fluid may be left in the tube for half an hour, and the whole process of cleaning need not take many minutes. Antiformin now is to be found in every laboratory, being used for the preparation of specimens for the staining of tubercle bacilli.

I am, Sir, yours faithfully,

Portland-place, W., Nov. 30th, 1912. G. NEWTON PITT.

DRUNKENNESS AND THE EFFECT OF ALCOHOL.

To the Editor of THE LANCET.

SIR,—It was rather a singular coincidence that on Friday last, after giving a lecture on the alcohol question at the Conservative Hall, Uxbridge-road, I should read in my weekly LANCET Dr. C. Mercier's refreshing article on Drunkenness and the Physiological Effects of Alcohol, and also your sensible leading article on Temperance Reform. I had tried to prove in the lecture that the extravagant statements that alcohol, in moderate doses, is a poison and is the chief cause of insanity and crime are really untruths. I showed by statistics that the number of public-houses to the population and Sunday closing has nothing to do with the ratio of drunkenness.

I have believed for many years that the only way to bring about true temperance is by example. When I was a student it was possible to see a number of students come to the hospital "fuddled" (a good word), and those who drank the largest quantity of beer were heroes; now they would be looked upon as sots. The same applies to West-end clubs. In my youthful days members frequently came into the club intoxicated; now they would be ostracised by their fellow members, and such would be the case of anyone partaking

of too much wine at a private dinner. Yet I remember at the festive board of a celebrated surgeon in the Eastern Counties, where the port was excellent, that many went under the table, the host smiling. I should like to see ostracism extend (I believe it has begun) to drunkards among the working classes, so that their fellow workmen who indulged in too much beer would be shunned.

A lady once was shocked at seeing a noted vicar, a relative of mine, come out of a public-house (he had many publicans in his congregation); he merely said, "If I remained always among the saints, how can I save the sinners?" Likewise the teetotaller cannot promote temperance by keeping away from the public-houses and vilifying drink and non-abstainers. I know many will contend that the above theory is wrong, and education has the credit for any good that we see. But I believe in example as a force long before education.

I will conclude by stating that after over 20 years of clinical practical experience I believe moderate doses of alcohol are beneficial to the majority of people, and that temperance would be better for the nation than total abstinence. I am, Sir, yours faithfully,

THOMAS DUTTON.

New Cavendish-street, W., Dec. 2nd, 1912.

To the Editor of THE LANCET.

SIR,—With reference to Dr. Mercier's amusing and instructive address in THE LANCET of Nov. 30th on this subject, I would point out that, when Dr. Mercier says that by his figures only 1 person in 8000 gets sufficiently drunk to fall into the hands of the police, his figures really give a ratio of 1 to 800, as 80,000 drunks to 32,000,000 population, and allowing 2 drunks to each person gives that ratio. With reference to those 2 drunks to each person (part of Dr. Mercier's huge set-off), I would point out that if the 32,000,000 of population is meant to represent the population of England and Wales in 1901, this set-off is neutralised by the fact that 14,000,000 of those 32,000,000 were young persons under 15 years of age, who would not be likely to be charged with being drunk, although it is true that some cases of boys and girls of 14 have occurred. (*Vide* the Registrar-General's report stating that for every 1,000,000 of the population 424,022 were under 15 years old and 575,998 over 15 years old.) Now 80,000 drunks to 18,000,000 population capable of being drunk would be, allowing 2 drunks to each person, a ratio of 1 to 450. In addition, "Drunkenness with aggravation" is the offence of being guilty, while drunk, of disorderly, indecent, or riotous behaviour, or of being drunk when in charge of children, animals, vehicles, or locomotives, or in possession of loaded firearms. But where a major offence is committed a person would not be charged with being drunk if he were so. On the contrary, the prisoner often pleads his drunken condition as mitigation of the crime or offence. This is in direct contradiction, by the way, to what (as I have read) was the practice in ancient Greece, where the offender was punished more severely if he committed an offence when drunk.

It may be interesting to state in support of Dr. Mercier's allowance of 2 drunks for each person that 57 per cent. of the persons charged in the year 1907 in New Zealand with drunkenness had convictions previously recorded against them for drunkenness in either that or previous years, and that the number of convictions per 1000 of the population there, excluding the Maoris, was in the year 1907, 11·08 (total number 10,166 out of practically 1,000,000 people). In the Commonwealth of Australia for 1906 it was 119·1 per 10,000 inhabitants, or 11·9 per 1000 as an average, although New South Wales taken separately reached 16·7, Queensland 14·0, and West Australia 13·4. A curious commentary is added by the Government statistician to the effect that "Australia, as is well known, is one of the greatest tea-drinking countries of the world." There is reason to believe, therefore, that the number of convictions for drunkenness in England and Wales and also for crimes resulting therefrom is considerably larger than Dr. Mercier suggests. The Lord Chief Justice was reported at the Alcoholism Congress in 1909 to have said that 90 per cent. of the crime of this country was caused by indulgence in strong drink.—I am, Sir, yours faithfully,

London, Dec. 2nd, 1912. STATISTICUS.

THE MEDICAL PROFESSION AND THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—As there seems a prospect of the very reasonable demands of our profession being met by the Chancellor in so far as a general agreement as to the terms under which medical benefit will be worked are concerned, the present seems to be an opportune moment to enter into the consideration of details.

Behind all the resistance of the medical profession to the original scheme and amended Regulations lies the intense desire of all of us to secure a better and more scientific service for the insured. So far as the Insurance Act can be adapted to secure a higher standard of clinical practice, in a manner acceptable to the dignity and in accordance with the honourable traditions of medicine, there are few among us who would do aught but welcome such opportunities as it affords. For my own part, I feel that the administration of medical benefit, when we come to consider an outline of the details on which it should be based, must be divided according to the density of the insured population. The figures are, of course, only in the possession of the Insurance Commissioners. Broadly, however, the insured can be regarded as divisible into urban and rural groups. The problems presented by these seem to me to be entirely different, and I feel that the British Medical Association would be wisely advised if the Insurance Committee were to consider the problem on the basis of such a division. Presumably the great masses of the insured population will lie within what we may call the industrial district or urban areas. For this I venture to suggest that some such scheme as the one I here outline will afford the means of improving the present club, dispensary, and out-patient practice to a degree which it is at present difficult to estimate, but which I believe to be, in contrast to what is now too often mere "pill and potion doctoring," almost unlimited. The outline of the scheme which I suggest should be considered by the profession for these areas is as follows:—

1. Premises should be secured as National Insurance Medical Department offices. These need not, and indeed would not, be expensive or difficult to rent, maintain, and clean. They could be called, if desired, National Insurance Dispensaries. They would be open at certain hours. Each dispensary would have allotted to it a certain number of insured persons—say, for instance, 10,000.

2. To each dispensary would be attached a dispenser and nurse, to be in attendance during the time when patients were being received at the dispensary and for the giving out of medicines both for patients seen at the dispensary and seen at home.

3. Doctors in the neighbourhood would be invited to attend at this dispensary and would form the panel or staff of the Local Insurance Dispensary. They would attend once, twice, thrice weekly at certain hours in a manner similar to that of ordinary out-patient practice. To each doctor would be allotted the insured persons who chose to place themselves if and when ill under his care. A large claim on the service of one doctor would imply his more frequent attendance at the dispensary.

4. When patients require the service of a doctor at home in acute illness messages should be sent to the doctor's house by a certain hour in the morning, except in cases of emergency.

5. A record of every attendance on every patient, either at the dispensary or at home, should be recorded in a book kept at the dispensary by each doctor. The home visits and emergency calls made between visits to the dispensary would be recorded under a separate heading. When patients attended at home were sufficiently recovered to attend at the dispensary, they would be sent by the doctor for convalescent or chronic attendance on his own day at the dispensary. I suggest that an attendance at the dispensary should count one, at home should count two, and emergency calls three on each occasion.

6. The absolute control and administration and management of dispensaries should be vested in the medical staff of those dispensaries so far as all medical matters are concerned.

7. The dispensaries in a group—for instance, say six—in a town having 60,000 insured persons, should have attached

to them a central scientific laboratory and X ray room. This laboratory should be equipped for the ordinary work of the clinical laboratory. To it all the usual specimens of blood, urine, sputum, &c., would be referred by the dispensaries grouped round it. For the rarer and more difficult pathological investigations other arrangements could be made with existing very highly equipped public laboratories.

8. A pathologist would be appointed to such a laboratory and would carry out such investigations as are here indicated for the dispensaries grouped round the laboratory. He would also be available for certain purposes, as might be arranged, for the occasional assistance of the staffs of the dispensaries and for the use of the X ray apparatus.

9. In connexion with each such scientific institution or National Insurance clinical laboratory there should also be a panel of consultants available for consultation with the staffs of the dispensaries at a modified fee either for seeing cases at home or at the specialisst' houses.

10. The funds available from each group of insured persons for medical benefit should be entirely devoted to the charges of the dispensary to which they are attached. These charges would include the cost of the dispensaries and the proportionate cost, incurred by each dispensary, of the upkeep of the central laboratory. The latter charges would include the use made of the laboratory and the consultations with the consultants by the staff of each dispensary. Consultations between members of the staff of a dispensary would conceivably count only as attendances, as it would be to the mutual advantage of all the staff of each dispensary not to incur excessive cost.

11. After paying these charges, which would be, say, £600–£800 a year for the dispensary and about £150 a year proportionate cost of the laboratory, the remainder of the funds would be divided among the staffs of the dispensaries in accordance with the individual service rendered. This would be computed by the records kept on some such basis as that I have suggested above—viz., counting one for attendance at the dispensary, two for home visits, and three for emergency calls. These units, added together in the case of each docter, would give so many units during the year as his share. The total attendances of the staff of each dispensary would be the divisor of the residue after paying expenses. I think if the figures are worked out they will be found not to be unsatisfactory to many men working at present under extremely tied and arduous personal conditions in many of the industrial quarters of our great towns. By arrangements between the individual members of the staff of each dispensary as regards emergency calls a certain amount of legitimate and desirable rest and recreation would be secured in a manner that is to my certain knowledge impossible among many of my friends tied to their surgeries.

12. Each group of dispensaries attached to a laboratory should have a committee of representatives from each dispensary who should form a medical committee of that group of dispensaries and deal with all matters of medical inquiry, complaint, or difficulties of any kind arising in the group. The records kept in the dispensaries would be readily accessible for this purpose and for such lay administrative control as is desirable. Such records are, of course, customary in the profession in certain classes of public medical work, and I do not personally fear the bogey of professional secrecy in regard to this matter provided complaints are in the first place dealt with by medical committees such as that suggested. Moreover, such a thing as vulgar prying curiosity on the part of zealous but mistaken members of Insurance Committees could be powerfully resisted.

It will be noticed that the above scheme does not provide for the difficulties of securing the most skilful treatment in institutions. The position of the great hospitals of this country in regard to the Insurance Act is at present undefined. As a question of expediency and convenience it seems a pity that those who have hitherto so largely supported hospitals, whom we may call in the aggregate the employer class, are practically unrepresented in the administration of the Act. Meanwhile, if there is anything worthy of consideration in the scheme I here produce I would say that the needs of the sick poor in regard to such matters as rare and obscure disease and surgical operations cannot be provided for under such a scheme as the National Insurance Act. Charity need not close her purse to medicine yet awhile. That great improvement in the home doctoring of the poor can be effected with the cordial coöperation of the medical profession, should the terms arranged with the Chancellor be sufficient, I am convinced. If I am right in my surmise that a large part of the insured population is found massed in urban areas the above outlined scheme may afford a basis for detailed consideration. Rural areas will require special and separate treatment. Minor matters, such as the migration of patients and mechanical details such as the prescription books, &c., of the insured, scarcely come within the scope of the already very long letter that I place in your hands.

I am, Sir, yours faithfully,

Harley-street, W., Nov. 26th, 1912. THOMAS DAVID LISTER.

THE NATIONAL INSURANCE ACT AND OUR VOLUNTARY HOSPITALS.

To the Editor of THE LANCET.

SIR,—Our voluntary hospital system is more than one of charity, and this point is not made much of in your excellent leading article in THE LANCET last week on the influence of the National Insurance Act upon hospital dispensation. The voluntary system supplies a practical training ground for the medical and nursing professions, together with facilities for much of the research work carried on. Those who heard or who have read the papers to which you have referred will remember the warning contained in Sir William Collins's paper, in passages which referred to the treatment of compulsorily insured persons in German hospitals. Briefly, the point is this. In Germany the insured person treated in a hospital as a matter of right, by virtue of that right refuses to be regarded as "clinical material." He is not willing to allow himself to be examined by students, or to be made the subject of demonstration in the theatre, and his claim to exemption is recognised. In a system like our own, which has grown up gradually, we have come to look upon the everyday practice of hospital life with regard to instruction as inevitable and inseparable from it. If we reflect that the use made of patients for instructional purposes may be distasteful to some of them, we argue reasonably and justly that this is the one return which it is in their power to make for the benefits which they receive from the medical profession and the public, and that future generations of patients will benefit in their turn by the training afforded. These are democratic days, however, when everyone adheres tenaciously to his rights, real or supposed, and if hospitals are to be subsidised by a public already far more fully represented on insurance committees than the medical profession, the resistance to the assertion of rights, even at the expense of the hospital training of medical students and nurses, may not be easy. If, moreover, for voluntary hospitals administering charity to the poor are substituted publicly supported hospitals instituted to secure their "rights" to all classes of workers included under the Insurance Act, the governing bodies of those hospitals are not likely to be constituted quite like the governing bodies of the institutions now mainly supported by the benevolent rich.

We are at a very critical period, and if it precedes an epoch of change in some degree irresistible, it is needful that all should do their utmost to withstand alterations of a drastic character made without a clear idea of what they may lead to. At the Birmingham Conference Mr. T. Basil Rhodes suggested the possibility of retaining a voluntary system with the aid of State grants made to supply deficiencies at the end of the year, after ascertaining that no blame for such deficiency attaches to the hospital. I question the possibility of such a policy, having in view its probable effect upon the minds of voluntary subscribers, who would know that the result of any stint on their part would be made good out of the public purse. Dr. Raw, whose opinion expressed in his paper to the effect that no insured person may be treated by the Poor-law authorities I do not quite follow, proposed four alternative courses for voluntary hospitals to adopt, inclining himself to his own third proposal which he summarised thus: that they should "cease to be voluntary institutions and have a fixed scale of charges—first, second, and third class, the beds to be open to all citizens (the insured persons would be third class and pay something like 2*s.* 6*d.* per day)." Such well-meant suggestions illustrate the difficulty there is in preparing to

meet a situation the precise nature of which will vary in different localities, and will not declare itself until it becomes of urgent importance to take steps to meet it. Such urgency is likely to be caused by lack of hospital funds through falling subscriptions and through an excusable impatience on the part of the public to see the insured receive a full measure of medical benefit in return for taxation already levied.

I am, Sir, yours faithfully,

Dec. 3rd. LAY-WORKER.

THIRD ANNUAL MEETING OF THE CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA IN NEW YORK CITY.

(FROM OUR OWN CORRESPONDENT.)

THE third annual meeting of the Clinical Congress of Surgeons of North America opened in New York on Nov. 11th and continued throughout the week. The meeting was an exceptionally successful one. More than 2600 surgeons from all parts of North America and from Europe registered at the Congress. The programme of the meeting was long and diversified, special attention, of course, being paid to the clinics. Each evening papers were read by well-known American and some European surgeons. The large ballroom of the Waldorf-Astoria Hotel was crowded to its utmost capacity. The oppressive heat which prevailed inside the Waldorf-Astoria Hotel, however, to Englishmen who are unaccustomed to the heating methods of American houses and public buildings, was decidedly unpleasant, and one was constrained to wonder why, if it is considered necessary to maintain so high a temperature, recourse is not had, at least, to means for producing air currents. There were no electric fans, though these are plentiful in summer time, and many present suffered from the air stagnation.

Opening Meeting.

At the first meeting the President, Dr. A. OCHSNER, of Chicago, said that if attendance at the Congress resulted in better service to the people it was a useful element in American progress. Much valuable information would be carried back by the members to all parts of the country for the benefit of the public. To the younger men who were doing excellent work the Congress offered an opportunity for demonstrating their methods. The observation of clinical work was also stimulating. The great surgeons of this country had very generally acquired their knowledge and skill after leaving the medical schools. Of those who had attained the highest rank not more than three or four would be found to have had a university education. It was the men who had been inspired to constant work who had risen to the highest rank. Dr. Ochsner then introduced the President-elect, Dr. Edward Martin, of Philadelphia, to whose efforts were chiefly due the development of the Congress. The visiting delegates were next introduced, including Dr. Otfrid Foerster, of Breslau, Germany, Mr. Arbuthnot Lane, of London, and Dr. J. B. Murphy, of Chicago.

Presidential Address.

Dr. E. MARTIN, in his presidential address, considered the treatment of Hepatic Cirrhosis, and said that in the surgical treatment of this condition the first important point was the approach, which must be advantageous for sight, touch, and manipulation. The second important point, one which had retarded the surgery of the liver so that it was far behind that of the kidney, was hæmorrhage. In many pathological conditions of the liver the tissue was brittle and yielded to local traumatism, but was resistant to wide pressure. This organ possessed no mechanism for checking hæmorrhage, but rather favoured it, since the large vessels were held open by their attachment to the parenchyma. But the blood pressure could quite easily be controlled by pressure on the vessels with the finger or by stitching around the area to be controlled. Dr. Martin then described his method of accomplishing this result. In decapsulation of the liver, he said, there was more superficial traumatism than with the kidney, although this operation seemed rational in hepatic cirrhosis. He believed ascites to be an advanced condition of hepatic cirrhosis, due not to back pressure, but to the diseased condition of the peritoneal endothelium. As a remedy he had endeavoured to modify the collateral circulation by making an anastomosis between the vena cava and the iliac vein.

Surgery of Liver and Spleen.

Dr. ALONZO TAYLOR, of Philadelphia, read a paper on the Relations of the Biochemical Functions of the Liver to Surgery of the Liver.

Dr. WILLIAM J. MAYO, of Rochester, Minnesota, read a paper on the Surgery of the Spleen. He described the functions of the spleen, so far as these are known, and remarked that with the present insufficient methods of diagnosis diseased spleen was not often made out until its enlargement became manifest on palpation beyond the free border of the ribs. Referring to splenic enlargement, Dr. Mayo said that these enlargements with an excess of white corpuscles were characteristic of myelogenous leukæmia, and the microscopical examination of the blood was essential to the diagnosis. Leukæmia appeared to be a reversion to the embryonic type of blood in which all the original blood-making organs had to do with the overproduction of the white cells. The leukæmic spleen had been removed several times, and in all the cases in which the diagnosis had been established the patient promptly died as a result of the operation. Since the leukæmic spleen was but part of the general condition, splenectomy would be unavailing. Splenic anæmia was probably a definite entity. It was due apparently to hyperplasia of the spleen, and if the disease was uncomplicated removal of the enlarged spleen cured the patient. At St. Mary's Hospital, Rochester, the spleen had been removed in 18 cases of splenic anæmia with very gratifying results. The speaker then dealt with conservative splenic enlargements due to malaria, syphilis, typhoid fever, and tuberculosis. In a few cases of tuberculosis, when the infection was apparently primary and limited to the spleen, the spleen had been removed with cure of the patient. A spleen which developed a complete mesentery, permitting of a wide range of motion, was not common. Rotation of the spleen completely cutting off the circulation had occurred in a number of cases leading to death or splenectomy. Several operations had been devised for reducing or restraining a moveable spleen in a normal position, but, generally speaking, splenectomy was the wiser procedure in this class of cases. Splenoplexy did not always relieve symptoms, and splenectomy was exceptionally easy and safe. Sarcoma was the type of primary malignant disease of the spleen, but it was rare. Pathologists were divided in their opinions regarding these tumours; some held that they were sarcomas, and others that they were a type of hyperplasia. One patient with lymphosarcoma of the spleen was operated on at St. Mary's Hospital in November, 1905, and was still in excellent health. Three cases of the Weichselbaum and Gaucher type of splenic tumour, which they had operated on, were clinically cases of splenic anæmia. Two patients had since remained well, while one had died from the operation. As a rule, disease of the spleen was far advanced before a diagnosis was made, and usually the entire organ was involved, making splenectomy the only rational procedure. Dr. Mayo explained the technique of the operation, and concluded by saying that the mortality therefrom should not be above 10 per cent., and possibly not above 5 per cent. In their 27 cases at St. Mary's Hospital there had been two deaths directly due to operation.

Anæsthesia, &c.

On Nov. 15th Dr. GEORGE W. CRILE, of Cleveland, Ohio, read a paper on Anæsthesia and Anoci-association, in which he discussed methods of anæsthesia introduced by him by which all harmful effects to both the sensory and sympathetic nerves were excluded. Dr. Crile concluded that a comparison of the effects of different anæsthetics in his series of 1000 cases showed that the methods used by him reduced the morbidity and consequently the mortality. In the Lakeside Hospital, Cleveland, the mortality rate for all operative procedures was 6 per cent. for all cases in 1898, 4 per cent. in 1908, and under anoci-association anæsthesia it had been reduced to 2½ per cent.

Professor OTFRID FOERSTER, of Breslau, spoke on the indications for, and results of, excision of the posterior spinal roots in man. The indications, he said, were based on the

physiology of sensibility. He described operations of this kind performed by him for the relief of various complaints.

Dr. CHARLES H. FRAZIER, of Philadelphia, read a paper on Some Problems and Procedures in the Surgery of the Spinal Canal.

Dr. D'ORSAY HECHT, of Chicago, discussed the surgery of the spinal cord from the neurological standpoint.

Dr. RICHARD R. SMITH, of Grand Rapids, Michigan, read a paper in which he described the enteroptotic woman.

Chronic Intestinal Stasis.

Mr. W. ARBUTHNOT LANE, of London, read a paper on Chronic Intestinal Stasis. He said that when he first began to study the matter it was not exciting much interest, but that the profession was now occupying itself more and more every year with the problems connected with this condition. The poisons absorbed from the intestinal tract damaged tissues and reduced the resistance of the various organs. Intestinal stasis facilitated the multiplication of bacteria, so that these extended beyond the bounds of their normal habitat, and thus produced infection of organs directly connected with the intestines. Furthermore, the toxins, being absorbed by the blood stream, were carried to distant tissues and produced progressive degenerative changes. Everything pointed to the fact that it was better to attack primary causes rather than end results. Chronic mastitis and cystic degeneration of the breast might be caused by intestinal stasis, and cancer also. He had seen a marked condition of exophthalmic goitre cured by cholecystotomy. Mr. Lane described by word of mouth and by diagrams on the screen how the site of intestinal obstruction could be gauged by bismuth and the X ray. He pointed out that it had been assumed that the absorption of toxins occurred only in the large bowel, but this was not the truth; the chief site was the small intestine. Stasis of the small intestine was secondary to that of the colon. As to medicinal remedies for this condition, Mr. Lane believed that the best results were to be obtained by the employment of liquid paraffin. The effect of this agent when administered at appropriate intervals during the day was to produce evacuations which ceased to be firm, to hasten the passage of the intestinal contents, and to obviate accumulations of fæces. Pressure on the splenic artery was relieved, allowing of a better blood-supply to the brain. When obstruction was due to a kink at the end of the ileum from the appendix or by an acquired mesenteric ligament, an operation was indicated. In suitable cases he did not hesitate to remove the colon, but if this removal entailed great risk to the patient he short-circuited.

Dr. JOHN R. CLARK, of Philadelphia, read a paper on Gastro-intestinal Stasis, Dr. ROBERT G. COFFEY, of Portland, Oregon, one on Replacing and Retaining Operations in Gastric and Intestinal Stasis, and Dr. JOEL G. GOLDTHWAIT, of Boston, discussed Orthopædic Principles in the Treatment of Enteroptosis and Chronic Intestinal Stasis.

Nov. 26th.

(To be continued

BRISTOL AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

University of Bristol: The Recently Conferred Honorary Degrees.

A LOCAL storm of criticism was aroused when the list of recipients of honorary degrees to be conferred at the recent installation of the Chancellor was published. It was, however, scarcely possible for the council to draw back, even if it had wished to do so; and, as has already been said in these columns, the graduation ceremony passed off without disturbance. The feeling aroused at the time of publication of the list did not die down, however, and Convocation passed a resolution of regret at the policy adopted by the council, which was forwarded to that body. Moreover, several London journals have seen fit to interest themselves in the matter, which has even attained to the unenviable distinction of furnishing a subject for comment by the half-penny press. The list, it is said, was very long, and what is especially blameworthy is that the council voted degrees wholesale to its own members. In a few cases the degrees were almost ludicrously inappropriate. The fact seems to be that the authorities carried out to an inordinate extent the policy of using the honorary degree list as a means of interesting all sorts and conditions of men in the University, and it is not at all likely that the same mistake will occur again.

The Bristol Tuberculosis Scheme.

At a meeting of the Bristol Insurance Committee held on Dec. 2nd the official scheme of organisation for the prevention and treatment of tuberculosis was brought forward and approved. It is proposed to have two dispensaries, one of which will be the already existing Redcliff Dispensary, while the other will be situated in Portland-square, an east central locality. For early cases the accommodation at Winsley Sanatorium will be increased from 21 to 50. Moderate, advanced, and after-care cases will be allotted 20 beds each, in three new blocks to be erected at Ham Green, the chief city fever hospital. Children under 10 and patients with surgical tuberculosis are to be admitted to the Novers Hill Hospital (an emergency fever institution) until some permanent arrangement can be made for them. The committee also decided to send a resolution to the Chancellor of the Exchequer deploring the proposal to re-arrange the method of payment for domiciliary treatment of tuberculosis, and urging that this should be made according to a scale agreed upon between Insurance Committees and the local profession. The committee has been in touch with the Local Provisional Medical Committee throughout, and resents the disturbance of the harmonious arrangements arrived at. It was stated that the Insurance Committee had already dealt with 102 applications for sanatorium benefit.

Annual Dinner of the Bristol Medical School.

This dinner, held, as in recent years, at the Royal Hotel, College Green, was notable above others in several respects. In the first place, the attendance—170—was unusually large. A second fact was the presidency of Mr. H. F. Devis, who has borne a very large share of the fight against the medical benefit clauses of the Insurance Act. The local profession felt themselves deeply indebted to him for his efforts, and this may perhaps account in some measure for the large attendance. The guest of the evening was Sir John Bland-Sutton, whose health was proposed by Mr. T. Carwardine. Mr. J. Paul Bush, replying on behalf of the Medical School, said he had long been connected with the organisation of the dinner, but had so far managed to escape making a speech. Principal Henderson replied for the other departments of the University. To the toast of "Past and Present Students," proposed by Mr. Cyril H. Walker, Captain P. G. Stock, R.A.M.C., and Mr. H. B. Logan replied, while the health of the President was proposed by Mr. F. T. B. Logan. Mr. Devis, in replying to this, gave some account of the Representative Meeting of the British Medical Association from which he had just returned, urging that the fight over the Insurance Act medical service must now become local, and impressing the necessity for a good organisation of the profession in Bristol.

Bristol Health Committee: Appointment of Medical Man as Chairman.

For the ninth year in succession Mr. Colston Wintle has been elected chairman of the Bristol health committee. In returning thanks for his election, Mr. Wintle said that within 12 years there had been 36 new Acts of Parliament imposing fresh duties upon the committee. He also gave an interesting and encouraging account of measures taken for the prevention and treatment of tuberculosis in the city.

Research Defence Society.

Under the auspices of the Bristol branch of this society Mr. Stephen Paget recently delivered a lecture, illustrated by cinematograph pictures, which was well attended. The chair was taken by Mr. Cyril Norwood, headmaster of the Bristol Grammar School, who spoke strongly in favour of experiments on animals.

"Fetching the Doctor."

A Keynsham motor engineer was recently summoned for driving a tri-car without a licence, but escaped without fine on the ground that he was fetching a doctor from Bristol to undertake the work of a Keynsham medical man who was unwell.

South Devon and East Cornwall Hospital, Plymouth.

On Nov. 27th, at the South Devon and East Cornwall Hospital, the new operating theatre, which has been built

as a memorial to the late Mr. Connell Whipple, was formally opened by the Bishop of Exeter, in the presence of a large company. Mr. Whipple had been a member of the honorary surgical staff of the institution for more than 40 years, and, as he had often urged the desirability of providing a new operating theatre, the subscribers to his memorial fund considered this would be the most suitable form of commemorating his long and valuable services to the hospital.

Bridgwater Hospital.

The annual meeting of the subscribers to the Bridgwater Hospital was held on Nov. 29th, under the presidency of Mr. R. A. Sanders, M.P. The medical report was satisfactory, and the financial statement showed that the residue of the bequest from the late Mr. Cook had been recently received, bringing the total amount from that bequest to £13,738. It was agreed that extensive repairs and additions to the hospital, including the erection of a new ward, should be carried out at an estimated expenditure of £2000.

Disputed Medical Account.

At the Tavistock (Devon) county court last week a medical man sued a patient for £4 10*s.* for medical attendance. The defendant stated that when the attendance was given she worked for her father, and the liability was his, and he had recently gone into bankruptcy. Verdict was given for the plaintiff, it being held that the attendance was given to defendant, who was of age, and consequently the account was rightly rendered to her.

Weston-super-Mare Hospital.

A ward at the Weston-super-Mare Hospital has been completely remodelled, renovated, and endowed as a memorial to the late Mr. W. H. James, and on Nov. 19th this was formally opened by the president of the institution, Mr. Ernest Baker.

Dec. 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical and Dental Defence Union of Scotland.

THE tenth annual report of the Medical and Dental Defence Union of Scotland shows that the past year has been marked by satisfactory progress on the part of the association, and that its financial position is thoroughly sound. It also shows that during the past year an exceptionally large number of claims have been made against members of the union, and that these have been very numerous against dental members. Why this should be the case the report does not pretend to say, but the fact that it is so adds weight to an important passage in the paragraph dealing with this branch of the union's work. It is a warning, the necessity for which other bodies safeguarding the interests of particular professions and callings will appreciate, stating, as it does, that "the council desire to impress upon the professions that they cannot in any case undertake the defence of an action which arises out of an incident occurring prior to membership." Obviously such membership has to be entered upon before the possible evil day arises, and subject to the principles which govern insurance. The subscriptions of those members who, fortunately for themselves, may not need support from the society in expensive litigation assist those who do, and the subscriptions of those who have recourse to the society in time of need will have to be paid for many years before the expenditure incurred on their behalf is reimbursed. It is satisfactory to note that the Medical and Dental Defence Union of Scotland, in spite of the numerous attacks upon its members which it records, adopts consistently an uncompromising attitude in dealing with claims which after investigation it believes to be unfounded and refuses to advise payment for the mere sake of settling with a troublesome litigant; also that the defence of every case undertaken by it in the year has had a satisfactory result. It may be noted from the specimen cases cited at the end of the report that a large proportion of the work done in the past year has consisted, as is usual and natural, in giving advice and information to members, and that among those who have so sought counsel are several dentists perplexed as to the obligations and limitations imposed upon them by the Shops Act, 1911. As to these questions negotiations are still pending.

The Question of Sanatorium Benefit.

In answer to a letter from the Glasgow Insurance Committee inviting representatives to a conference in Glasgow upon the recent proposal of the Chancellor to take 6*d.* per head from the sanatorium benefit fund and to add it to the ordinary medical fund for the remuneration of doctors, the Aberdeen Sanatoria Committee, instead of sending delegates, decided to submit a statement of their views on the proposal, since they, unlike the Glasgow and most of the other West of Scotland committees, were convinced that the new proposal was better than the old. The letter stated that the committee did not think any good purpose was to be served by taking part in what was practically a protest meeting against the Government's recent proposal. In view of regulations already drafted and other possible alternatives, they had come to the conclusion that the latest proposal of the Government was the wisest yet devised, alike in its financial and administrative aspects. The question was not so much whether the withdrawal of 6*d.* from the *per capita* allowance of 1*s.* 3*d.* would leave an inadequate amount for the institutional treatment of cases, as whether the treatment of non-institutional cases would cost in the aggregate more than the 6*d.* per head of insured persons. Although the local practitioners displayed anything but an unreasonable spirit in the negotiation with the Committee it was obvious that what might be termed the extra medical services must dip into the sanatorium fund to an extent not quite realised by the ordinary layman. In conclusion, the committee agreed with the contentions of the protesting committees that an allowance of 9*d.* per head for the institutional treatment of tuberculosis patients was quite inadequate for the purpose. Where this committee joined issue with their western colleagues was in the assumption that the additional 6*d.* would cover the minimum cost of treatment for non-institutional cases which, in the very nature of things, must remain a first charge on the available funds of Insurance Committees.

Aberdeen Royal Infirmary: New Out-patient Department.

The new out-patient department of the Aberdeen Royal Infirmary was formally opened on Nov. 25th. There was no special ceremony in connexion with the opening. The new buildings include casualty, dressing, surgical, skin, dental, nose, ear, and throat, and medical departments. The new buildings are on the opposite side of the street, and quite distinct from the main block of the institution.

A Practitioner's Jubilee.

A meeting was held on Nov. 25th of a committee, appointed for the purpose, to organise a testimonial to Dr. W. R. Duguid, sen., Buckie, on the occasion of the attainment of his professional jubilee. It was unanimously agreed to present Dr. Duguid with his portrait, and it was remitted to a committee to select the artist. At the age of 72 years Dr. Duguid is strong and vigorous, daily engaging in his professional work, together with his son, Dr. W. R. Duguid, jun. During the last half century Dr. Duguid has served on most of the public boards in Buckie, taking a leading part in all matters pertaining to the well-being of the community. In 1875 he was appointed a justice of the peace, and some years ago he was appointed honorary sheriff-substitute for Banffshire. He took a leading part in the formation of the Moray Firth Fisheries Association, and was president of the association for several years. He also was a member of the Fishery Board for Scotland for 15 years, having a large knowledge and interest in all matters pertaining to the fishing industry.

Dec. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Lead Poisoning.

As I have previously reported, a Commission has been appointed in France to find a remedy for the disquieting depopulation of the country. The investigation will be directed not merely towards the causes of the diminishing birth-rate, but also towards the excessive mortality figures. M. Orliac and M. Calmette have paid special attention to one

of these causes—viz., plumbism, not only as it affects individual cases of lead poisoning, but also in relation to its evil influence on the descendants of the workman. From various statistics it appears that in the succeeding generation of those afflicted with plumbism, out of 123 pregnancies there were 64 miscarriages, 4 premature births, 5 still-births, and 20 deaths of infants during the first year. Another series of statistics shows 609 miscarriages out of 1000 pregnancies; a third, that of 236 pregnant women only 32 per cent. carried the child to term, and of the children born at a viable age only 27 per cent. survived. The proportion, naturally, is better when only one of the parents is affected, but even in these relatively favourable cases there is, according to English statistics, a considerable default and a large number of miscarriages. M. Armand Gautier, also, has computed that of a thousand workers in yellow and red oxides of lead, or dry carbonate of lead, or who are engaged in making pewter, every one is more or less affected with plumbism; that the unsoldering of tins of preserved fruits affects 280 per 1000; and that a considerable number of industries—polishing printing type, house painting, enamelling, paint grinding, the manufacture of cartridges, the laying of telephone wires, and so forth—expose the worker, though less constantly, to the same danger. Precautions against plumbism are, therefore, of the first importance.

The National League against Alcoholism.

The National League against Alcoholism has issued an appeal to the women of France, in which it recalls the fact that last February the Chamber of Deputies delayed the Bill, which has been under preparation for 15 years and had passed the Senate, for limiting the number of drinking shops. This action has been loudly protested against throughout the country. So far back as 1903 the Academy of Medicine unanimously pronounced in favour of such limitation, since which time the great majority of councils of the departments, as well as numerous medical and philanthropic societies, have protested against the delay in this urgently needed reform. The National League consequently turns to woman, the natural guardian of the hearth, to create such a tide in favour of limiting these places that the Assembly shall struggle against it in vain. It calls on the women of France to sign in their masses a petition in favour thereof, and thus to secure victory in the struggle.

Proposed Memorial to Professor Lannelongue.

The friends, pupils, and admirers of the late Professor Lannelongue have decided to erect a monument in memory of this illustrious surgeon in his birthplace, Castéra-Verduzan (Gers). A committee has been appointed, under the patronage of the President of the Republic, with Dr. Léon Labbé, who is a Senator and a member of the Academies of Science and Medicine, as president.

Dust.

The dust problem in the great towns, notwithstanding the attention with which it is studied, stops short at discussion. The dusting-broom is still in general use, with the natural result that dust is simply wafted from one piece of furniture to another. In public halls the most obvious effect of ventilators is to set in motion and render injurious millions of microbes, which otherwise would remain quiescent and not gain access to the respiratory passages of those present. Filthy people, carrying on them the dirt of their work, are allowed to travel in the public conveyances. M. Sartory and M. Langlais have shown, in a very interesting book, by what simple and easily applied principles it is possible to secure protection against pathogenic germs. They cite, as an instance, the case of the street-sweeper, who raises clouds of dust with his broom, which penetrate into the houses, soiling and infecting them, and covering the furniture and carpets with dirt; while soon afterwards this same dust is returned to the streets by the beating of carpets and so forth. Yet it is very easy to remedy these dangers to human life.

Chronic Intestinal Obstruction by Cherry-stones.

On Nov. 27th M. Souligoux communicated to the Société de Chirurgie the case, observed by M. Marquis, of a person who was accustomed to consume, stones and all, a large number of cherries. Seven years before his entrance into hospital he had suffered from abdominal pains, which, however, had disappeared for a time. Recently they had returned with severity, and on examination a swelling could be detected in the umbilical region. On opening the abdomen a large tumour was found, measuring 30 centimetres in length and 20 in height. It was formed by the small intestine, which was much contracted below. An intestinal anastomosis was made, and was followed by the expulsion of 770 cherry-stones. M. Marquis considered the narrowing to be probably of tuberculous origin.

The Treatment of Fractures of the Patella.

Before the Academy of Medicine on Nov. 26th M. Le Dentu made a communication of great interest relating to fractures of the patella and their treatment. These lesions are often produced with such ease as to seem almost spontaneous. The rarefaction of the bony tissue is a very frequent cause. While so-called spontaneous fractures are not rare in locomotor ataxia, a correlation of them with those of the patella can hardly be established at present. Hardly half a dozen such cases have been well studied. But diabetic fracture of the patella should be less rare than would appear from these observations, for the rarefaction of bony tissue is frequent and cannot always be attributed to physiological osteoporosis. After formulating with minute precision the diagnosis, calling attention to the importance of absolute or relative spontaneity, of the insensibility of the entire region, and of the signs of tabes, however poorly marked they may be, M. Le Dentu described an operative procedure used by him, which consisted in half encircling the patella on both sides and vertically transfixing it. This procedure had given most satisfactory results in his hands, and his description of it aroused considerable attention.

Cocainism.

On Nov. 18th M. Briand and M. Vinchon presented before the Société Clinique de Médecine four patients, all cocaine takers, belonging to the same class—viz., the women of Montmartre, which offers all the conditions requisite for the development of a mental contagion. Of these four patients, one presented the symptoms of general paralysis, two were cured, and one was on the road to cure. In these patients troubles of general sensibility prevail. Hallucinations and illusions are variable. They seem rather to be reminiscences of singular intensity. Attacks of delirium are numerous and constantly followed by similar reactions—quarrels among the women themselves and disputes with the chauffeurs of taximeter cabs, in which cocaine habitués appear especially to take the drug. Cutaneous anæsthesia is variable, often localised in the extremities, from which arise clumsiness and incoördination. The authors did not note the classical convulsive accidents, but only trembling in various degrees. The mental enfeeblement was parallel to the physical. Irritability was excessive. The craving comes on early, appearing often on the second day. It is less imperious than in the case of morphia, perhaps because there is no struggle, in consequence of the abolition of will power in cocaine habitués, who rarely break themselves of their habit.

Splenic Diagnosis of Typhoid Fever.

M. Vincent, in continuation of his researches into typhoid fever, is studying the diagnosis of typhoid by the spleen. Hypertrophy of the spleen in typhoid appears with sufficient constancy to entitle it to be regarded as one of the usual signs of this disease. He has therefore investigated the question whether the inoculation of patients suffering from the paratyphoid B form of typhoid fever, with a certain dose of antigen of the same kind—extracts or autolysates of typhoid or paratyphoid bacilli—will excite in this organ a reaction that can be utilised for diagnosis. Out of 39 cases of typhoid fever this spleno-reaction has been noted 37 times, or in over 94 per cent. of the cases. Hypertrophy of the liver has been observed in 35 per cent. of the cases. In three patients attacked with paratyphoid B fever, verified by blood cultures, the extract of bacillus paratyphoid B gave rise to a very marked spleno-reaction. The swelling of the spleen shows itself between 10 and 18 hours after the injection, sometimes earlier, but in two cases it was delayed for 30 hours; the antigen used in these two cases, however, was of feeble activity. The spleen continues swollen for about two or three days. On the other hand, the spleno-reaction was entirely lacking in healthy subjects. It has appeared in patients suffering from other diseases as follows: miliary tuberculosis, 1; intractable tuberculous fever, 3; pneumonia (of which one was of the typhoid

type), 4; pulmonary congestion with high temperature, 2; infectious grippe, 4; Mediterranean fever, 1. It is important to note that patients suffering from typhoid fever are indifferent to the paratyphoid antigen, and conversely patients suffering from paratyphoid B fever have reacted exclusively to the autolysate of bacillus paratyphoid B and have presented no spleno-reaction to that of the typhoid bacillus. The spleen responds, consequently, to specific excitation, by an equally specific hypertrophy, whence it follows that this method can be applied to the clinical diagnosis of these infections.

Dec. 2nd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

University of Berlin.

THE chair of Pædiatry in this University will become vacant at the close of the present session by the retirement of Professor Heubner. The post will be offered first to Professor Czerny of Strasburg, and if declined will be offered in turn to Dr. Finkelstein of Berlin and Dr. Salge of Freiburg.

Foreign Medical Men in Germany.

The Bavarian medical chambers have petitioned the Bavarian Government that the latter may move the Federal Council to take measures for preventing foreign medical men from practising in Germany without a German qualification. The petition originated in a complaint by the Medical Society of Kissingen, the well-known Bavarian health resort, that several Russian medical men had settled there, together with a staff of unqualified assistants, dentists, masseurs, &c. As already explained in these columns, especially in the Students' Number, there is no general prohibition against holders of foreign diplomas practising in Germany, provided they do not make use of any professional title resembling those of qualified German medical men. The Kissingen Medical Society was of opinion that something must be done, or eventually foreign medical men might settle in greater numbers in those German spas where foreign patients usually come for treatment. These medical men are by no means bound to observe the ethical rules of the profession, as is the case for German medical men, who are under the jurisdiction of the court of honour of their medical chamber. The mode of practising of some of the above foreign medical men has indeed not been in accordance with the ethical rules. The petition states that some foreign medical men have settled in Germany after taking the degree of M.D. at a German university (which does not confer the right of practising without the State examination). Others have assumed the title of "Arzt," which is a German professional title, adding only "qualified abroad," and some law courts have declined to interfere in these cases. Foreign States do not admit German medical men; in Italy, Great Britain, and Switzerland only medical men of countries giving a reciprocal right may legally engage in practice. Austria, France, and Russia exclude foreign medical men altogether unless they have passed all the professional examinations necessary for natives of the respective countries. It is therefore, in the opinion of the petitioners, desirable to amend the present law, which is of such doubtful interpretation that the decisions of the law courts often differ. It should be clearly stated that practising without a German qualification is illegal. The question of foreign medical men practising in Germany has been often discussed by the medical profession here. Certainly foreigners, especially patients visiting German spas, often desire to be attended by their countrymen, who speak their language and know the mode of living in their country. The number of German medical men who meet these requirements is rather small. Foreign medical men would certainly like to take the German qualification, but the difficulty is that a foreign medical man desiring to become qualified in this country must first pass the Abiturienten-Examen in general subjects—foreign languages, mathematics, history, &c.—after which he must take the full curriculum of five years, then pass the State examination, and finally, spend the "practical year" in attendance at a recognised hospital. Exemptions are allowed only in rare cases by a special order, very difficult to obtain. Obviously no foreign medical man will be willing to begin professional study all over again as if he were a youth, and as if all that he had learned abroad were valueless. Therefore some medical men have adopted the expedient of practising without a qualification under the conditions mentioned in the petition of the Bavarian medical chambers. This state of things is very undesirable both for foreign patients, for the foreign medical men, and also for the German profession. There are, however, two ways of satisfying all the requirements—namely, either (1) to grant a German medical qualification without an examination to foreigners coming from countries which give reciprocity to German medical men; or (2), if this is impracticable, to allow foreign medical men qualified abroad to pass the State examination without being obliged to pass the Abiturienten-Examen, to take the five years' curriculum, and to pass the other examinations.

Legislation Relative to Infants' Feeding Bottles.

The Imperial Government has introduced a Bill into Parliament by which not only the manufacture and sale of infants' feeding bottles provided with tubes, but also the importation of such bottles from abroad, are prohibited. The motives of the Bill are that those bottles being difficult to clean are sometimes the cause of gastro-intestinal diseases. The medical press approves of the Bill, because it may contribute to a decrease of the mortality of infants from the diseases in question. In the daily press, however, a correspondent has written in support of an opposite view on the ground that although these bottles have been in use for some 50 years the mortality from gastro-intestinal diseases has diminished. He also states that in Russia, Austria, England, America, and some other countries such bottles are almost exclusively in use, and are for the greater part imported into those countries by German manufacturers. He therefore argues that it would be sufficient to prohibit the sale of such bottles in Germany without prohibiting the manufacture of them for export into foreign countries, for the factories where they are made will have to close if the Bill becomes law, with the result that some thousand workmen will lose their employment. A similar law has existed for some time in France, where the decrease of the population has led to such energetic measures.

The Decrease of the Birth-rate.

The decrease of the birth-rate is being much discussed in Germany. At a recent meeting of the Statistical Society Professor Oldenburg said that this decrease was a well-recognised fact in many nationalities, and that it has occurred in Germany somewhat later than in other countries. According to him the birth-rate stood in connexion with the progress of industrialism. Rural populations were more fertile than urban populations, and the formation of great industrial centres, which have induced many people from country places to settle in towns, has thus contributed to the decrease of the birth-rate. If the population of Germany was nevertheless rapidly increasing, the increase has been caused by a constant decrease of the death-rate. Berlin headed all the other European capitals in the percentage decrease of the birth-rate, and the suburbs of Berlin, which have arisen upon what was formerly agricultural land, had actually a still smaller birth-rate than the city itself—for instance, Schöneberg had a birth-rate of only 16·4 per 1000. The Minister of the Interior has also dealt with the matter. He has asked the medical chambers for the causes of the phenomenon. His first question was whether the procreative or generative capacity of the population has diminished. The Berlin chamber has answered that this is the case, and that it is caused by the increase of gonorrhœa in women and of artificially induced abortion. The Minister further asked whether the decrease of the births may be intentional on the part of married couples, and, if so, what may be the motive? The reply of the chamber was in the affirmative as to the first part of the query, and added that the motive for this voluntary avoidance of conception is partly the desire for comfort and luxury by which a great deal of the family income is absorbed, and partly the desire to preserve the family inheritance from subdivision among many descendants. The propaganda of the neo-Malthusians and the advertisements in the newspapers recommending various anticonceptional methods are also alleged as contributory causes.

Nov. 25th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Hospital Nursing in Italy.

THE hospitals of Italy are almost without efficient nursing in the sense in which nursing is understood in England. The male wards are in the charge of male attendants, who do little more than look after the general cleanliness of the wards and of the patients, and in the female wards the same functions are performed by women of the class of the ward-maids of the London hospitals. All the other duties assumed by English nurses are performed, as far as may be necessary, by the young medical officers of the institutions. The great difficulty in the way of improving the nursing service is that of inducing a better educated class to enter it. The Croce Rossa enlists in its ranks persons of all classes, and the lectures given in connexion with the various volunteer ambulances are well attended, but the profession of nurse in the hospitals attracts only the servant class, and its recruits are often those who find it difficult for various reasons to obtain private situations. The result is that the hospital patients are looked after by attendants, badly educated and often venal, who take up this work without any love for it and solely as a source of livelihood. The medical profession is fully alive to the importance of the question and to the inferiority in which these hospitals are placed when compared with those of other great civilised countries. An attempt is now making to remedy the present state of things both by legislation and by private initiative. A Bill will shortly come before the Chamber to provide schools for nurses in every province of the kingdom. Special courses are to be held for nurses and diplomas will be granted, and after Jan. 1st, 1914, no public institution for the care of the sick is to be allowed to employ any nurse not possessing this diploma. In Rome since 1907 there has been a nursing school, the "Regina Elena," attached to the Policlinico, and there is also a nursing school in connexion with the hospital belonging to the Blue Nuns, an English Roman Catholic nursing sisterhood who do good work both in Rome and Florence. On Nov. 25th there was inaugurated at Milan the "Ospedale-Scuola," erected and endowed by Signorina Adelina De Marchi in memory of her brother Victor. It is intended to be a training school for nurses on English lines, and is under the charge of an English nurse as matron. It contains 32 beds for patients and rooms for 25 to 30 probationers. There are also quarters for the matron, the resident medical officer, and the director. There are out-patient rooms, examining and operating rooms, and rooms for lectures and for recreation. The building and its equipment are on the most modern lines, and place Milan in the forefront of the movement for the reform of nursing in Italy.

The National Anti-Alcohol Congress.

This Congress was opened in Florence on Nov. 10th and was remarkably well attended. Excessive indulgence in alcohol is said to be on the increase in Italy, owing largely to the introduction and common consumption of spirits and liqueurs. To judge from statistics published in the *Gazzetta degli Ospedali*, the consumption of wine and beer is not immoderate, the average per head per annum being 84 litres of wine and 1 of beer, which may be compared with an average of 163 litres of wine in France and 225 litres of beer in Belgium. Still there is obviously an increase of drunkenness and of drinking places in Italy, and the *congressisti* in Florence agreed on various remedies for the evil, among them the proposal that agriculturists should be encouraged to substitute other crops for the cultivation of the vine by means of rebates on taxes and town duties for a number of years. A motion, proposed by Avvocato Rosadi, a well-known Florentine deputy, that drunkenness should be made a punishable offence and the offender promptly arrested, was also agreed to. The banquet which brought the gathering to an end was remarkable for the number and excellence of the speeches, which owed nothing to the fructifying influence of "spumante," for mineral waters were the only drinks provided.

Dec. 2nd

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Outbreaks of Disease in Connexion with the Balkan War.

THE Balkan war has already had the unwelcome effect that cholera is prevalent in an alarming degree not far from our frontiers, and the Board of Health has, therefore, ordered a stringent quarantine for all arrivals either by water or by railway from all Balkan countries; the goods traffic, as regards imports from these countries, is also much restricted owing to the war. The public health authorities are aware that the outbreak is due chiefly to various shortcomings, including a sad neglect of sanitary precautions on the part of the belligerents on both sides. In consequence of a request made by the Bulgarian Government a number of medical men interested in the study of cholera has been sent to Sofia, including Professor Kraus, head of the Vienna Sero-therapeutic Institute, and four of his assistants, together with four pathologists from Professor Weichselbaum's Pathological Institute. The Turkish Government has also asked medical men to enter the Turkish service solely for cholera duty. Large quantities of Haffkine's serum have been despatched to the fighting line and to the Red Cross hospitals, as plague, as well as typhoid fever and dysentery, is believed to be raging throughout the armies. Only a few days ago an urgent order for a large quantity of antitetanus serum was supplied from our Sero-therapeutic Institute, for numerous cases of tetanus are now occurring in consequence of many wounded men, mostly Turks, having lain on the ground for days without aid, so that infection was only too easy. Small-pox has also broken out both in the fighting line and amongst interned combatants, who have escaped into Austrian territory and been disarmed there. Our sanitary authorities are therefore adopting every precaution.

Orthopædic Surgeons and School Gymnastics.

Orthopædic surgeons in Vienna have issued a united appeal to the general practitioners and the public on behalf of the scientific observation of the physical fitness of school children. It has lately been found that since an increased amount of attention is being paid in schools to the health of the pupils, in numerous cases gymnastic exercises have been recommended by the school boards and have taken place in the schools. The surgeons, however, point out that in pathological bodily conditions indiscriminate gymnastics may not have the desired effect. They therefore advise school medical officers and teachers to have each affected child examined by a competent surgeon and to send such children as show even traces of scoliosis (whether rachitic, or traumatic) or paretic or congenital weakness of the limbs to the special orthopædic "ambulatorium" or to a private surgeon. In this way only can a case be properly examined and suitable treatment advised. When it is remembered that various organic and functional abnormalities of the vertebral column are frequently aggravated by a faulty position while writing and sitting in school, the reasonableness of this appeal will be evident.

Abuses in the Out-patient Departments.

The Vienna Medical Council (Aerztekammer) has submitted to the State authorities a resolution dealing with abuses of frequent occurrence in the out-patient departments of the Vienna hospitals. The hospitals and policlinics were originally intended for the benefit of the poor, but lately the Krankenkassen (sick clubs), or rather their medical officers, have been accustomed to send their patients to the hospitals whenever treatment was likely to be tedious or necessitated a large expenditure of dressing material, or if specialist advice seemed necessary—for many of these sick clubs have no specialists attached to them. On the other hand, in the out-patient departments patients are mostly treated without any inquiries being made into their financial or social standing, and it therefore often happens that persons well able to pay for medical advice obtain it in these institutes free of any charge. Attempts which have been made to correct these abuses have hitherto been ineffectual, for the heads of these institutes fear that systematic inquiries or restrictions would result in a serious drop in the number of patients. But naturally the private

practitioners lose a large percentage of patients who otherwise would be their legitimate clients. Within the last few years the financial position of the profession has become so unsatisfactory owing to the increase of the number of Krankenkassen that practitioners must find some means of arresting this wholesale withdrawal of possible patients. They justly argue that if a medical man cannot find time to treat the club patients he ought not to accept such a post, and that if the club requires the services of specialists for its members it should appoint such. The State authorities seem to recognise the force of these arguments, and there is every reason to suppose that in the near future regulations will be issued which will tend to satisfy the requirements of the profession. The problem is not an easy one, for the out-patient departments and the "ambulatoria" form an important addition to our facilities for medical teaching, all post-graduate and all specialist work being most intimately connected with them. If there should be a serious fall in the number of patients attending these departments the value of the instruction obtained there would be materially endangered. The interests of medical education and those of the practising profession will have to be balanced against each other, and a middle course must be followed so as to reconcile them both.

Dec. 2nd.

NATIONAL INSURANCE ACT.

MEMORANDUM AS TO MEDICAL BENEFIT, FURNISHED TO THE BRITISH MEDICAL ASSOCIATION BY THE CHANCELLOR OF THE EXCHEQUER.

A DEPUTATION from the British Medical Association waited upon the Chancellor of the Exchequer on Nov. 25th and 26th, with a view to submitting for the consideration of His Majesty's Government a number of points in connexion with the administration of medical benefit under the National Insurance Act.

The questions raised were fully discussed with the members of the deputation, and have received the most careful consideration of the Government. The following statement is intended to indicate as clearly as possible the questions under discussion and the decision of the Government in respect to each of them.

I.—DUTIES OF MEDICAL PRACTITIONERS ON THE PANEL.

1. The deputation indicated the desire of members of the medical profession that they should have the clearest possible explanation of the scope of those professional services which insured persons, whom it would be their duty to attend and treat under agreements with insurance committees, might call upon them to render in pursuance of such agreements.

2. Under Section 15 of the Act every Insurance Committee must adopt such system for the provision of medical attendance and treatment as shall secure that every insured person is entitled to select his doctor (subject to that doctor's consent) from a panel to which every practitioner has a statutory right to belong. The insured person cannot demand from any member of the panel thus constituted services beyond those which every member of that panel may reasonably be expected to give. Every practitioner acting on a panel will be required to enter into an agreement with the Insurance Committee, containing the provisions stated in the First Schedule to the Regulations. It is there laid down that the treatment which the practitioner, by entering into the agreement, undertakes to give to insured persons under his care shall be that which can, consistent with the best interests of the patient, properly be undertaken by practitioners of ordinary professional competence and skill. This does not mean what can be expected from the individual practitioner who happens to be treating any particular case, but what can ordinarily be expected from a member of the group to which that practitioner belongs.

3. It is believed that this definition will enable practitioners on the panels at once to decide, in the enormous majority of cases, whether any particular service which they are asked to render falls within the scope of those which they have undertaken by their agreement with the Committee. The practitioner would obviously not consider it to the interest of the patient that an operation requiring special surgical skill should be undertaken (unless as a matter of urgency) by a practitioner who does not possess that skill, and his professional duty to his patient will preclude him in such a case from undertaking the operation, and it would not be incumbent upon him under his agreement. On the other hand, circumstances arise in which, in ordinary practice, it would be the duty of a general practitioner to his patient to perform an operation, on account of the urgency of the case, rather than incur the risk of possible injury to the patient, through the delay or through removal, which might be entailed in obtaining the assistance of a person of special skill. If such an emergency occurs in the case of an insured person, and if the practitioner responsible for the care of that patient decides that it is his duty to his patient, in view of its urgency, to do it, the operation in that case would fall within the services which he has undertaken to render under his agreement with the Insurance Committee.

4. Another case that appears to present doubt to some practitioners is that in which the practitioner on the panel has acquired special skill in some branch of medicine or surgery, and is treating a case requiring, for example, an operation which in virtue of his special skill he is competent to perform, but which a practitioner not possessed of such special skill could not (except in emergency) properly undertake. In such case the performance of the operation by the practitioner on the panel would not (except in emergency) be part of the duties which he had entered into agreement with the Insurance Committee to perform, and the insured person could not require him to perform it as part of that person's medical benefit.

5. Although it is believed, as above stated, that but few cases will arise in which, in practice, members of the profession acting on the panels will have difficulty in deciding whether any given service which they are asked to render falls within those undertaken under their agreement with the Committee, it is recognised that such cases will occasionally arise. In order to arrive at an easy and summary manner of deciding any such case it is proposed that any medical practitioner on the panel should refer the case to the Local Medical Committee, and that that Committee or the Insurance Committee should, if they think it desirable, refer the matter for decision to a Court of Referees to be set up for the purpose by the Government. These would be appointed from among members of the medical and legal profession by the Insurance Commission.

6. The following examples may be given, not as an exhaustive catalogue, but as illustrative of the principle stated. X ray diagnosis and pathological or bacteriological investigations would not be services included in medical benefit. Major operations are also excluded (except in the circumstances of urgency above mentioned), and as an indication of what is intended by the term "major operations" there may be instanced trephining, laparotomy, operative treatment of fractures, amputations of limbs, and any operation requiring the assistance, in the operation, of an additional medical man besides the operator and the anæsthetist.

II.—REMUNERATION FOR MEDICAL BENEFIT.

7. The total amount available in any year for the remuneration of medical practitioners on the panels, in consideration of every kind of service rendered by them under their agreement with the Insurance Committee for medical benefit, is 6s. 6d. (with a possible addition to be mentioned) per head of all the insured persons who elect to obtain their attendance and treatment from practitioners on the panel; that is to say, there will be in any area a fund equal to an aggregate sum of at least 6s. 6d. per head of all the insured persons who have to be attended by practitioners on the panel, which will be applied solely to the remuneration of the practitioners on the panel.

8. In addition, in every case in which the total amount required for the provision of drugs and appliances is less than 2s. per head of insured persons attended by practitioners on the panel, the amount saved in this respect (up to a total not exceeding 6d. per head) will be added to the fund applied to the remuneration of practitioners on the panel.

9. Further, a sum equal to 6d. per head of insured persons on the lists of the practitioners on the panel will be distributed among these practitioners in respect of the domiciliary treatment of insured persons suffering from tuberculosis. This amount will be provided from the sanatorium benefit fund.

10. The whole of the fund described above will be distributed in each year (according to the method of distribution adopted in each area) among the practitioners on the panel for that area. No deduction will be made from it in respect of the cost of drugs and appliances or administrative expenses or any other purpose. On the other hand, this amount will cover the payment for every kind of service (as described above) which any practitioner on the panel is under obligation, by his agreement with the Insurance Committee, to render to insured persons under his care.

Extras.

11. Of the services to be rendered by the practitioners on the panel as medical benefit, some have been from time to time distinguished as "extras." This term is used in the Regulations and here to connote services which, although within the competence of an ordinary practitioner, differ somewhat in their character from ordinary visits and surgery attendances. Examples are: such operations as the general practitioner can reasonably be expected to perform, the administration of anæsthetics for the purpose of such operations, the setting of fractures, and also visits, such as night visits and special visits, which entail extra trouble. A list of special services of this kind was given in the schedules to the Provisional Regulations issued on Oct. 1st. The Chancellor of the Exchequer explained, in his statement to the Advisory Committee on Oct. 23rd, that the additional sum which the Government had decided to ask Parliament to provide was so calculated as to afford, when added to the amount available for medical remuneration under the Act, a sum which the Government considered would provide sufficient remuneration for all ordinary attendances and also for all "extras," the cost of which can properly be defrayed from the funds available for the provision of medical benefit.

Payment for "Extras."

12. The question how these "extras" are to be paid for is a question of the method adopted for distributing among the practitioners on the panel in each area the aggregate amount available for medical remuneration in that area. Three main methods have been suggested. The first is that of capitation, pure and simple. That is to say, each practitioner on the panel, in an area in which this system is adopted, would receive himself the entire amount available for medical remuneration in respect of all insured persons for the time being on his list, and would accept, in consideration of that amount, the full liability of providing for those persons the medical services of every kind (within the limits explained above) to which they are entitled as medical benefit.

13. The second method is that of capitation for ordinary visits and surgery attendances, with payment by fees in respect of extra services. In any district in which this system is adopted, an agreed portion of the total amount available for medical remuneration would be set aside at the commencement of each year, to provide the pool out of which fees for extras would be paid, and this amount would be distributed among the practitioners rendering those services according to such scale as might be agreed upon for the purpose, within the limit of the money in the pool. The remainder of the amount available for medical remuneration, being the consideration for ordinary services

rendered, would be divided among the practitioners on the panel in proportion to the number of persons on their lists.

14. The third method is that of simple payment per attendance, under which practitioners on the panel will receive fees in respect of each attendance made or other service rendered within the limits of the aggregate amount available in that area for medical remuneration.

15. Examples may be taken to illustrate the different working of these several methods of remuneration. If an operation were required which it was within the competence of an ordinary practitioner to perform, it would be equally the duty of a practitioner on the panel, whatever method of remuneration had been adopted in the district, to perform that operation under his agreement with the Insurance Committee. If the method were payment per attendance, he would receive a fee in accordance with the arrangements locally adopted, the fee being derived under the second method from the pool for extras, and under the third method from the general pool. If, on the other hand, he had entered into an agreement on the basis of a simple capitation payment, no special fee would be payable.

16. If, again, the administration of an anæsthetic (where needed for an operation which is itself within medical benefit) were necessary, the fee of the anæsthetist would be paid, under the second or third method, out of the pool. But under a simple capitation method the practitioner would have received in his capitation payment an amount calculated to cover the risk of this necessity, and would consequently make his own arrangement for the provision of the anæsthetist in such a case without further remuneration.

Second Opinions.

17. In view of the fact that the Act gives to the insured person the right to receive treatment from the one practitioner whom he chooses from the panel, any further advice which may be desired by the patient must be arranged for outside medical benefit.

Agreement as to Method of Remuneration to be Adopted in any Area.

18. Under the Regulations any one of the main methods of remuneration above outlined (or a modification of any one) may be adopted in the area of any Insurance Committee, or different methods may be adopted in different parts of a county. The Act precludes any arrangement whereby the decision as to the method should rest solely with the Local Medical Committee. It will be a matter for agreement, if possible, between the Local Insurance Committee and the Local Medical Committee, and if they cannot agree, for a decision by the Commission. But, naturally, the matter is one in which both the insurance Committees and the Commissioners will desire to give the fullest consideration to the views of the medical profession as represented by the Local Medical Committee of each area.

Special Questions as to "Extras."

19. The deputation desired that explanations should be given as to certain special cases of "extras." The first of these was the treatment of abortions and miscarriages (coming before the seventh month of pregnancy) and of disease due to personal misconduct. It would be the duty of a practitioner on the panel to treat these, when occurring among the insured persons on his list, in so far as the treatment of them falls within the scope of a practitioner of ordinary competence and skill.

20. Treatment of accidents and industrial diseases in respect of which compensation is being received under the Workmen's Compensation Act will also be the duty of a practitioner on the panel, in so far as they can be treated properly by a practitioner of ordinary competence and skill.

Position of Persons Insured in Special Accident Funds.

21. In connexion with the subject of "extras," the deputation inquired as to the position, in respect of medical benefit, of insured persons who have already made special provision, through accident funds in connexion with works or through organisations such as the Lancashire Miners Permanent Relief Funds, for the provision of treatment for accidents and industrial diseases. It was pointed out that, under such arrangements, treatment was often given which was beyond the range of that required from the practitioner on the panel. A continuance of arrangements of this kind is specially provided for in Section 15 (4) of the Act, under which such funds may be approved as systems or institutions, and insured persons who are entitled to receive attendance and treatment under such arrangements may elect to continue to receive it as part of their medical benefit, a contribution being made from the Medical Benefit Fund towards the cost of medical attendance and treatment so obtained. Or such arrangements may be continued by those insured persons who apply to be allowed to make their own arrangements under Section 15 (3), a contribution from the Medical Benefit Fund being made by the Insurance Committee to the cost.

Possibility of Charging Insured Persons for Medical Attendance.

22. The deputation brought to the notice of the Chancellor of the Exchequer a passage from his speech of Feb. 12th, 1912, on the subject of medical benefit. It appeared that they, or some members of the profession, had inferred from that passage that it would be possible to establish a system under which the practitioners on the panel, in cases in which the doctors charged fees in any period in excess of the amount available for medical remuneration, would be able to recover from the patients the balance of the fees beyond what was available from the medical benefit fund. The Chancellor of the Exchequer was not referring, however, in the passage in question (as is shown by the context) to the cases of insured persons who obtain their treatment under the arrangements made by Insurance Committees, but to those who "make their own arrangements" under Section 15 (3) of the Act. It is not possible under the Act for practitioners on the panels to make such an arrangement as this in respect of insured persons whom they attend under their agreement with the Committee. The new grant which Parliament is to be asked to make towards the cost of medical benefit is intended to enable every Insurance Committee to secure that there shall be in its area sufficient practitioners (whether acting on panels or employed under some alternative system) to attend insured persons in consideration solely of the remuneration provided by the Committee, the insured persons themselves being liable to no further charge for the services included in medical benefit as explained above. But it will still remain possible for any insured person, who so desires, to make his "own arrangements" with an individual practitioner (whether on the panel or not) on terms under which he will be liable to pay to the doctor such amount, if any, as the doctor charges for attendance and treatment (apart from drugs) during the year, beyond the amount available from the medical benefit fund.

III.—Unreasonable Demands by Insured Persons.

23. The deputation represented that practitioners should be allowed to make a small charge to insured persons in respect of night visits and special visits, less with the object of increasing the doctor's remuneration, than of providing a deterrent against unreasonable demands. It would be impossible under the Act to require an insured person to make any additional payment for these services. The point is proposed to be met, however, by rules made by the Insurance Committees under which they will have power to fine insured persons, or in the case of repeated offences to suspend them from medical benefit, if they make unreasonable demands upon the professional services of the doctors attending them. The Commissioners propose to issue to Insurance Committees a set of model rules for the administration of medical benefit which make provision for this point.

IV.—Medical Benefit for Insured Persons Changing their Place of Residence.

24. It appears to have been recognised already to some extent by the medical profession that the question of the payment for the medical attendance of persons who migrate from one area to another is virtually only one of a bookkeeping adjustment between the practitioners of the different areas concerned, effected through the medium of the Insurance Committees. Where the changes are only from one place to another within the same Committee's area, the adjustments will be made by that Committee between the practitioners on the panels of the different places affected. So far as insured persons are concerned, the object to be aimed at is to make reasonably sure that each insured person on changing his abode is able to obtain a doctor at the new place of abode without undue difficulty or delay. So far as the profession is concerned, the object must be to secure that those members of the profession who are under liability to provide attendance at any time shall receive the appropriate remuneration in respect of such attendance, whether such remuneration be calculated on the capitation or on the payment per attendance basis.

25. The system proposed is that the insured persons who are to receive medical benefit will have the duty of notifying upon their arrival, to the Insurance Committee of the place to which they go, the fact that they desire to be able to obtain medical benefit there. Upon such notification being received the name of the person will be placed automatically on the list of the Committee into whose area he has gone, and the Committee will place him upon the list of some doctor chosen by him, or, in default of choice, will assign him to some doctor on the panel in exactly the same manner as the ordinary allocation of the insured persons resident in the area is made. There will follow an adjustment of account between the two Committees and a corresponding adjustment of the amount appropriated to remuneration of the practitioners in the two areas—each doctor (on the capitation system) taking the risk for the portion of the year during which the person is on his list, and receiving proportionate payment. This operation can take place as often as any person migrates from one area to another.

26. It is an essential feature of the system proposed that (whether the change be from the area of one Committee to that of another, or from one place to another within the area of the same Committee) no person should remain upon the lists of two doctors at the same time.

V.—Mileage.

27. Mileage has been included by the British Medical Association among items referred to as "extras." In the Provisional Regulations power is given to an Insurance Committee to provide for special payment being made, from the funds available for medical remuneration, in consideration of attendance and treatment given to patients who reside at such a distance from the doctor as to entail special loss of time and expense in visiting them. The question whether any and if so what provision should be made in this respect would be a matter for decision within the area in the same manner as any other question of the method of distribution of medical remuneration.

28. The deputation inquired whether the Government could make additional financial provision for payment of mileage over and above the amount of 6s. 6d. at present available. After careful consideration the Government are of opinion that in ordinary rural districts, taking into consideration the fact that the dispensing will usually be done by the doctors, who will, therefore, receive the profit from the provision of drugs in addition to their ordinary medical remuneration, the amount already available is sufficient to provide adequate remuneration. They recognise, however, that in some parts of the country which are exceptionally sparsely populated, and in which there are special difficulties of access (such as mountainous districts, moorlands, and fens), the practitioners would be placed at a special disadvantage. They have, therefore, decided to ask Parliament to provide a small special fund to be applied by the Commissioners in making increased provision for such areas. Mileage would not, in any case, be paid from the medical benefit fund in cases where an insured person wishes to be attended by a practitioner living at a distance, if one residing nearer was available. But there is nothing to prevent the insured person from making an arrangement himself with the more distant practitioner if he specially desired his services, and the practitioner is willing.

VI.—Records and Reports.

29. The profession have shown themselves unduly apprehensive of the amount and character of the clerical work which practitioners on the panel will be required to undertake. As already stated by the Chancellor of the Exchequer in his letter to the British Medical Association, what is wanted is only such day-to-day records as will furnish information of value as to the incidence of disease. Such records can be kept in a form which will entail very little trouble upon the medical practitioner, as appears from the draft form of day-book which has been shown to the deputation.

30. The entries will include name and address of patients, record (in abbreviated form) of number of attendances, age, sex, occupation, and nature of illness. Each leaf will be perforated so that the part containing the name and address of the patient, and the attendances, will

be sent to the Insurance Committee, while the part containing the nature of illness and certain other particulars (but not anything by which the patient can be identified) will be used for statistical purposes only. Thus, secrecy will be secured, and any danger of breach of professional confidence entirely avoided. Provision will be made to enable the doctor to retain in the book (which is in his sole custody) a carbon duplicate of all the entries. The books will be furnished free of charge by the Commissioners to practitioners on the panel.

31. At present it is not known that any records, reports, or returns beyond the simple record above indicated will be required, but it cannot be said definitely that circumstances may not arise under which the profession may themselves recognise the desirability of collecting from practitioners on the panel further information as to the incidence of disease. The Government undertake, however, that during the period of three years, for which, as announced by the Chancellor of the Exchequer, it is proposed that the financial provision now made shall continue, no Insurance Committee shall require from practitioners on the panel information beyond that already specified, without the consent of the Local Medical Committee.

VII.—INSPECTION.

32. The Government do not contemplate, as appears to have been feared by many members of the profession, that there should be any routine inspection of the medical practitioner's diagnosis and treatment. Still less do they intend, or have they intended, that practitioners should, as has been stated, be "shadowed in their visits to their patients."

33. It is contemplated that medical officers of the Commission will be required from time to time to report upon the general arrangements made by each Insurance Committee, in order to enable the Commissioners to satisfy themselves that the conditions of the new Exchequer grant are being complied with. It will also be necessary to obtain reports upon the arrangements made by approved systems or institutions, and upon the contract arrangements entered into by insured persons making their own arrangements in accordance with Section 15 (3) of the Act, in order to ascertain that the conditions of approval, or the terms of the contract (as the case may be) are being carried out, and that continuance of contributions from the medical benefit fund to the cost of attendance and treatment obtained under such arrangements is justified.

34. The inquiries necessary in connexion with such "inspection" would not include any criticism of the treatment given by a doctor to an individual patient, nor would it mean any interference between doctor and patient.

VIII.—INVESTIGATION OF COMPLAINTS AND REMOVAL FROM PANEL.

35. Questions were raised by the deputation as to the procedure proposed in the Regulations for dealing with complaints in which medical practitioners on the panel and insured persons were concerned, and also as regards the procedure in cases of removal from the panel.

Complaints.

36. On the first subject the deputation were understood to urge that the Regulations should be so amended that a complaint against a doctor should not be investigated by any body not purely medical in its composition. Exception was taken on this ground, not only to the Committee of Complaints proposed to be set up under the Regulations, but also to consideration of such matters by the Insurance Committee.

37. No regulations could be so framed as to exclude the Insurance Committee from any power of considering any complaint by an insured person against a practitioner on the panel. The Insurance Committee have no power under the Act to remove a practitioner from the panel, or, under the Act and the Regulations, to take any action (if they considered a complaint substantiated) beyond transferring the patient to the care of another practitioner on the panel, or referring the matter for the consideration of the Insurance Commissioners. The provision as to the Committee of Complaints was inserted in the Regulations with a view to the protection of practitioners on the panel, by securing that a complaint should not be considered by the Insurance Committee until it had been sifted in private session by a body in which the medical profession and the insured were equally represented.

38. In view of this explanation it was gathered from the deputation in their second interview with the Chancellor of the Exchequer that in their opinion the profession would probably prefer a procedure of the kind indicated in the Regulations rather than that the matter should be left entirely to the Insurance Committee without some preliminary investigation by a body on which the profession are specially represented. The deputation were understood to consider, however, that the duties of the proposed Committees might with advantage be somewhat widened and the title altered, accordingly, to "Medical Service Sub-Committee." In view of these representations the provisions as to the Committee will be retained subject to the changes desired; and if it should appear later to be the general wish of the profession that these provisions should be deleted from the Regulations this will be done.

Removal from Panel.

39. As to the procedure in cases of suggested removal of a practitioner from the panel, the Act does not allow the Commissioners to divest themselves of the responsibility of deciding the question, or to transfer this responsibility to any other body than themselves, as the deputation appeared to desire. The Government is prepared, however, to meet the profession with regard to the composition of a Committee of Inquiry, whose advice the Commissioners must, under the Regulations, have before them, before dealing with such complaints against practitioners as come to the Commissioners. The Regulations will be amended so as to set up a tribunal for this purpose consisting of members of the medical profession with one lawyer.

IX.—INCOME LIMIT.

Decision as to Fixing Income Limit.

40. The deputation desired that power should be given to a Local Medical Committee to appeal to the Insurance Commissioners where an Insurance Committee refuse to fix an income limit. This is impossible under the Act, which places the discretion in this matter entirely in the hands of the Insurance Committee, and their decision is not subject to review by the Commissioners.

Mode of Applying Income Limit.

41. The deputation indicated that the profession are in doubt as to the effect of the provision in Regulation 13, under which an Insurance Committee, in fixing an income limit, may "exempt" a class of insured persons from the operation of the limit. The effect of this provision is to enable an Insurance Committee to fix an income limit as regards any class of insured persons with regard to whom they may consider it equitable, while exempting from the operation of that income limit those with respect to whom it would operate harshly. For instance, the Committee might fix an income limit of a certain amount which would apply to certain classes, such as farmers and tradesmen, but from which manual workers would be exempted. If a limit were so fixed, the farmers and tradesmen would be required to make their own arrangements for obtaining medical attendance, and a contribution would be made by the Committee towards the cost of the attendance which they so obtained.

Voluntary Contributors.

42. Another point raised by the deputation had reference to the position of those who, having insured for five years, may under the Act remain in insurance as voluntary contributors, even though their income exceeds £160 per annum. The Chancellor of the Exchequer indicated in June last that the Government would be prepared to give sympathetic consideration to the representation of the medical profession that this case required special treatment as regards the right to receive medical attendance under the arrangements made by the Insurance Committee. The question cannot arise definitely until 1917, and the Government will include a provision dealing with it in the first amending Bill which they bring forward.

Method of Estimating Amount of Income.

43. The deputation asked that in estimating the amount of income for the purposes of income limit, the income from all sources should be taken into account, and that the method of estimating the income of farmers for income-tax purposes should not be used for this purpose. As already pointed out, the question of whether an income limit shall be fixed in any area, and, if so, what that income limit shall be, is a matter for the Insurance Committee, from whose decision there is no appeal. It is also a matter for the Insurance Committee to decide how the income is to be ascertained. The Government have no reason to suppose that the method adopted for income-tax purposes is suitable, or would be likely to be adopted, for the purpose of the income [illegible] any, fixed by an Insurance Committee under the Act.

X.—RIGHT OF INSURED PERSON TO MAKE ARRANGEMENTS.

44.—The deputation pressed that an insured per[son] right to make his own arrangements for medical [attendance] whether an income limit were fixed for that area, [or] to the Insurance Committee power to decide w[hether] insured persons to make their own arrangemen[ts] exercised by the Insurance Committee whet[her] income limit or not, and has no reference to th[e] income limit prevails in the area.

XI.—DISPENSING.

45. The Act precludes the Commissioners fr[om] generally to the doctors on the panel.

The Government are, however, prepared to ar[range] the panel may dispense drugs and medicines f[or] cases in which the patient resides in a rural area [more than] mile from a chemist on the panel.

XII.—APPROVED SYSTEMS AND INSTITU[TIONS]

46. The questions raised by the deputation related to (i.) [the] of branches newly established by existing institutions; (ii.) [the] guards against diversion of contributions received by institutions from medical benefit funds to purposes other than the provision of medical attendance and treatment, or cost of drugs and appliances; and (iii.) the free choice of doctor by patient as affected by the recognition of systems and institutions.

47. With regard to the first point, special consideration will be given, before approving, under Section 15 (4), any branch not itself existing at the time of the passing of the Act, of any system or institution which existed at that time.

48. As to the second point, the contribution from the medical benefit funds to the funds of a system or institution in respect of medical attendance and treatment and provision of drugs supplied to an insured person (as, or as part of, his medical benefit), is a contribution to the cost actually incurred, and must be so applied that it cannot be diverted to other purposes. Contributions towards the cost of medical attendance and treatment will be distinct from contributions towards the cost of drugs and appliances, and contributions under each head must be applied accordingly.

49. As to the third point, the free choice of a doctor by an insured person is fully secured in the case of a system or institution, because (*a*) it rests entirely with him to decide whether he will obtain medical attendance and treatment through that institution, rather than from a doctor on the panel or under any other arrangements made by himself; and (*b*) he retains complete freedom to terminate at the end of any year the arrangements under which he obtained his medical benefit from the institution. By selecting the institution he declares his desire to be attended by the doctor or doctors of that institution, for the time being appointed under its rules to give attendance and treatment to the members of the institution.

XIII.—DEPOSIT CONTRIBUTORS.

50. The deputation suggested that arrangements should be made whereby attendance should not be given to deposit contributors, and to persons who have been admitted to Approved Societies without medical examination, at the same rate as to those who have been admitted to societies after examination.

51. So far as deposit contributors are concerned, the anticipations as to the nature of this class have been falsified. Deposit contributors will be fewer in number than was anticipated, and, instead of consisting of bad lives, are found by experience to include a very large proportion of persons of the best type of life insured under the Act. The vast majority of insured persons have already joined Approved Societies,

and the residue have for the most part refrained from joining from reasons which have nothing to do with their state of health.

52. As to the persons admitted without medical examination to societies, they constitute such an overwhelming majority of all the persons who have been so admitted (probably 80 per cent.) that it would be impossible to make any discrimination in respect of them.

53. The whole of the persons falling within either category are persons who are subject to the test of being in work at the time of admission, and the great bulk of them are the ordinary lives of the community.

54. It would be impracticable to provide, as appears to be suggested by the deputation, that medical practitioners should be remunerated in respect of either of these classes of insured persons, taken as a whole, upon different terms from those applicable to the insured generally.

XIV.—PAYMENT FOR SANATORIUM BENEFIT.

55. The deputation were anxious that it should be made clear that the 6d. drawn from the Sanatorium Benefit Fund to defray the expense of the domiciliary treatment of insured persons suffering from tuberculosis would be paid in respect of attendance upon insured persons only, and would not include any obligation to treat their dependants. This has throughout been the intention of the Government, as already stated by Mr. Masterman in the House of Commons.

XV.—MEDICAL REPRESENTATION ON INSURANCE COMMITTEES.

56. The deputation asked that the medical members of each Insurance Committee should constitute not less than one-tenth of the whole Committee. The Government accede to this request. The Insurance Commissioners will include among these members of each Committee whom they appoint such number of medical members in each case as, together with the members appointed by the profession and by the local authorities, will make the total number of medical members at least one-tenth of the whole Committee. In making these appointments they will consider any names suggested by the Local Medical Committee of the area.

THE SPECIAL MEETING OF THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

A special meeting of the Council of the British Medical ciation was held on Dec. 4th to consider the andum of the Chancellor of the Exchequer, arising s interviews with the five special representatives of tation, and the Report thereon of the State Sickness Committee.

ncil, after a long and careful debate, issued a he Divisions embodying the interpretations put Memorandum by the State Sickness Insurance as well as the representations made to Mr. Lloyd the deputation of five.

ncil decided that a vote should be taken in the greed upon at the last meeting of the Repre- Body; that the votes should be returned to the office by Dec. 18th, and should be counted on 19th; and further that a special meeting of the Repre- ntative Body should be held on Saturday, the 21st.

Medical News.

THE following medical men have been elected upon the council of the British Fire Prevention Committee: Sir J. Cockburn, K.C.M.G., M.D. Lond., Major R. J. Maitland Coffin, F.R.C.P. Edin. (as one of the honorary medical officers), and Dr. R. W. Henderson.

UNIVERSITY OF LONDON: A CLUB FOR GRADUATES AND OFFICERS.—A meeting was held at the University on Foundation Day (Nov. 28th), the principal, Sir Henry Miers, presiding, to consider the question of establishing a club for graduates, teachers, and officers of the University. In the letter convening the meeting it was stated that the Senate, while disapproving of the formation of a social club of which men and women undergraduates could become members, would welcome the establishment of a club for graduates, teachers, and officers, and would be prepared to consider an application for an annual subvention if the premises provided satisfactory accommodation for the meetings and business of undergraduates' societies and for other university purposes. A resolution moved by Mr. Wickham Hurd, LL.B., proposing the establishment of a club on the general lines approved by the Senate was carried unanimously, and a committee was appointed to consider the best means of carrying the resolution into effect, with instructions that the club should be a members' club in preference to a proprietary club. The committee are to report to another general meeting. It was generally considered that the annual subscription should be moderate, and that every effort should be made to meet the requirements of provincial members, of whom it was hoped that a large number would join. The committee were, however, requested to consider and report on alternative schemes.

THE Penal Reform League will hold their annual meeting at Caxton Hall, Westminster, on Friday next, Dec. 13th, at 8 P.M., when Professor Sir John MacDonell will take the chair.

THE next meeting of the Hunterian Society, a clinical and pathological evening, will be held on Wednesday, Dec. 11th, at 9 P.M., at St. Bartholomew's Hospital, by kind permission of the hospital authorities.

THE annual festival dinner of the West Ham and Eastern General Hospital will be held at the Hamilton Hall, Liverpool-street Hotel, on Thursday, Dec. 12th, at 7.30 P.M., when the chair will be taken by the Marquis of Winchester.

ROYAL SURGICAL AID SOCIETY.—To celebrate the jubilee of the Royal Surgical Aid Society a luncheon was held at Cannon-street Hotel on Dec. 3rd, when Lord Aberdeen presided. The society, which was established in 1862, is now the largest to supply all kinds of surgical appliances to the poor, irrespective of creed, and the committee is making an appeal for donations. Since its foundation the society has supplied 750,000 appliances. The first year's income was £240; this year it was £27,469. The membership is 8,000. In the afternoon of the same day the annual meeting of the society was held at the Mansion House.

THE PAUL PHILIP REITLINGER PRIZE.—The prize offered this year by the University of London for an essay embodying the result of some research work on a medical subject, has been awarded to Frederick James Fitzmaurice Barrington, M.S., University College Hospital Medical School, for an essay on the Innervation of the Bulbo-urethral Glands and their Histological Changes during Activity. The prize, which is of the value of £30, was founded with funds given to the University by Mr. Albert Reitlinger in memory of his son, a student of St. George's Hospital Medical School, who died on Dec. 3rd, 1911. Next year the prize will be awarded for the best essay on the influence of the conception of evolution on moral or social philosophy.

THE SOCIETY OF APOTHECARIES.—The annual Lord Mayor's Day dinner of the society—always a most pleasant gathering—was held on Nov. 29th at Apothecaries' Hall under the chairmanship of Mr. W. Bramley Taylor, the Master. The company included the Lord Mayor and Sheriffs of London, Sir Rickman J. Godlee (President of the Royal College of Surgeons of England), the Dean of St. Paul's, Sir W. Watson Cheyne (President of the Medical Society of London), Dr. Frederick Taylor, Mr. G. H. Makins, Dr. F. de Havilland Hall, Sir William Christie, Dr. J. A. Ormerod, Mr. Charles Stonham, and Mr. Mowbray Upton (clerk of the society). After the loyal and civic toasts had been honoured the senior warden, Dr. Martindale C. Ward, in proposing the toast of "The Royal Colleges of Physicians and Surgeons," dwelt on the need for unity in the profession, and paid a tribute to the help given by the Colleges. Dr. Frederick Taylor, who responded for the Royal College of Physicians, said amidst applause that the Government would have done far better if it had had more trust in the medical profession, which was always pressing forward in the interest of the public. Sir Rickman J. Godlee, replying on behalf of the Royal College of Surgeons, declared that the coöperation of the two Colleges and the Society of Apothecaries had been of advantage in the recent trying times. In his opinion the most important thing for the profession to do at the present moment was to demand an alteration in the representation of insured persons upon the Local Insurance Committees, so that medical men should not be thrown back into the hands of the friendly societies. The toast of "The Society of Apothecaries" was proposed in a humorous speech by Sir W. Watson Cheyne, who, among other amusing digressions, told how a stranger had once mistaken him for a Scotsman. The Master, in reply to the toast, claimed that the society was doing its duty, both as a City guild and as an educational body, and, whilst continuing its social and benevolent activities,

be sent to the Insurance Committee, while the part containing the nature of illness and certain other particulars (but not anything by which the patient can be identified) will be used for statistical purposes only. Thus, secrecy will be secured, and any danger of breach of professional confidence entirely avoided. Provision will be made to enable the doctor to retain in the book (which is in his sole custody) a carbon duplicate of all the entries. The books will be furnished free of charge by the Commissioners to practitioners on the panel.

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VIII.—INVESTIGATION OF COMPLAINTS AND REMOVAL FROM PANEL.

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Complaints.

36. On the first subject the deputation were understood to urge that the Regulations should be so amended that a complaint against a doctor should not be investigated by any body not purely medical in its composition. Exception was taken on this ground, not only to the Committee of Complaints proposed to be set up under the Regulations, but also to consideration of such matters by the Insurance Committee.

37. No regulations could be so framed as to exclude the Insurance Committee from any power of considering any complaint by an insured person against a practitioner on the panel. The Insurance Committee have no power under the Act to remove a practitioner from the panel, or, under the Act and the Regulations, to take any action (if they considered a complaint substantiated) beyond transferring the patient to the care of another practitioner on the panel, or referring the matter for the consideration of the Insurance Commissioners. The provision as to the Committee of Complaints was inserted in the Regulations with a view to the protection of practitioners on the panel, by securing that a complaint should not be considered by the Insurance Committee until it had been sifted in private session by a body in which the medical profession and the insured were equally represented.

38. In view of this explanation it was gathered from the deputation in their second interview with the Chancellor of the Exchequer that in their opinion the profession would probably prefer a procedure of the kind indicated in the Regulations rather than that the matter should be left entirely to the Insurance Committee without some preliminary investigation by a body on which the profession are specially represented. The deputation were understood to consider, however, that the duties of the proposed Committees might with advantage be somewhat widened and the title altered, accordingly, to "Medical Service Sub-Committee." In view of these representations the provisions as to the Committee will be retained subject to the changes desired; and if it should appear later to be the general wish of the profession that these provisions should be deleted from the Regulations this will be done.

Removal from Panel.

39. As to the procedure in cases of suggested removal of a practitioner from the panel, the Act does not allow the Commissioners to divest themselves of the responsibility of deciding the question, or to transfer this responsibility to any other body than themselves, as the deputation appeared to desire. The Government is prepared, however, to meet the profession with regard to the composition of a Committee of Inquiry, whose advice the Commissioners must, under the Regulations, have before them, before dealing with such complaints against practitioners as come to the Commissioners. The Regulations will be amended so as to set up a tribunal for this purpose consisting of members of the medical profession with one lawyer.

IX.—INCOME LIMIT.

Decision as to Fixing Income Limit.

40. The deputation desired that power should be given to a Local Medical Committee to appeal to the Insurance Commissioners where an Insurance Committee refuse to fix an income limit. This is impossible under the Act, which places the discretion in this matter entirely in the hands of the Insurance Committee, and their decision is not subject to review by the Commissioners.

Mode of Applying Income Limit.

41. The deputation indicated that the profession are in doubt as to the effect of the provision in Regulation 13, under which an Insurance Committee, in fixing an income limit, may "exempt" a class of insured persons from the operation of the limit. The effect of this provision is to enable an Insurance Committee to fix an income limit as regards any class of insured persons with regard to whom they may consider it equitable, while exempting from the operation of that income limit those with respect to whom it would operate harshly. For instance, the Committee might fix an income limit of a certain amount which would apply to certain classes, such as farmers and tradesmen, but from which manual workers would be exempted. If a limit were so fixed, the farmers and tradesmen would be required to make their own arrangements for obtaining medical attendance, and a contribution would be made by the Committee towards the cost of the attendance which they so obtained.

Voluntary Contributors.

42. Another point raised by the deputation had reference to the position of those who, having insured for five years, may under the Act remain in insurance as voluntary contributors, even though their income exceeds £160 per annum. The Chancellor of the Exchequer indicated in June last that the Government would be prepared to give sympathetic consideration to the representation of the medical profession that this case required special treatment as regards the right to receive medical attendance under the arrangements made by the Insurance Committee. The question cannot arise definitely until 1917, and the Government will include a provision dealing with it in the first amending Bill which they bring forward.

Method of Estimating Amount of Income.

43. The deputation asked that in estimating the amount of income for the purposes of income limit, the income from all sources should be taken into account, and that the method of estimating the income of farmers for income-tax purposes should not be used for this purpose. As already pointed out, the question of whether an income limit shall be fixed in any area, and, if so, what that income limit shall be, is a matter for the Insurance Committee, from whose decision there is no appeal. It is also a matter for the Insurance Committee to decide how the income is to be ascertained. The Government have no reason to suppose that the method adopted for income-tax purposes is suitable, or would be likely to be adopted, for the purpose of the income limit, if any, fixed by an Insurance Committee under the Act.

X.—RIGHT OF INSURED PERSON TO MAKE HIS OWN ARRANGEMENTS.

44.—The deputation pressed that an insured person should have the right to make his own arrangements for medical attendance in an area, whether an income limit were fixed for that area or not. The Act gives to the Insurance Committee power to decide whether they will allow insured persons to make their own arrangements. This power can be exercised by the Insurance Committee whether they have fixed an income limit or not, and has no reference to the question of whether an income limit prevails in the area.

XI.—DISPENSING.

45. The Act precludes the Commissioners from giving "dispensing" generally to the doctors on the panel.

The Government are, however, prepared to arrange that a doctor on the panel may dispense drugs and medicines for insured persons in cases in which the patient resides in a rural area, and is more than a mile from a chemist on the panel.

XII.—APPROVED SYSTEMS AND INSTITUTIONS.

46. The questions raised by the deputation related to (i.) the position of branches newly established by existing institutions; (ii.) the safeguards against diversion of contributions received by institutions from medical benefit funds to purposes other than the provision of medical attendance and treatment, or cost of drugs and appliances; and (iii.) the free choice of doctor by patient as affected by the recognition of systems and institutions.

47. With regard to the first point, special consideration will be given, before approving, under Section 15 (4), any branch not itself existing at the time of the passing of the Act, of any system or institution which existed at that time.

48. As to the second point, the contribution from the medical benefit funds to the funds of a system or institution in respect of medical attendance and treatment and provision of drugs supplied to an insured person (as, or as part of, his medical benefit), is a contribution to the cost actually incurred, and must be so applied that it cannot be diverted to other purposes. Contributions towards the cost of medical attendance and treatment will be distinct from contributions towards the cost of drugs and appliances, and contributions under each head must be applied accordingly.

49. As to the third point, the free choice of a doctor by an insured person is fully secured in the case of a system or institution, because (a) it rests entirely with him to decide whether he will obtain medical attendance and treatment through that institution, rather than from a doctor on the panel or under any other arrangements made by himself; and (b) he retains complete freedom to terminate at the end of any year the arrangements under which he obtained his medical benefit from the institution. By selecting the institution he declares his desire to be attended by the doctor or doctors of that institution, for the time being appointed under its rules to give attendance and treatment to the members of the institution.

XIII.—DEPOSIT CONTRIBUTORS.

50. The deputation suggested that arrangements should be made whereby attendance should not be given to deposit contributors, and to persons who have been admitted to Approved Societies without medical examination, at the same rate as to those who have been admitted to societies after examination.

51. So far as deposit contributors are concerned, the anticipations as to the nature of this class have been falsified. Deposit contributors will be fewer in number than was anticipated, and, instead of consisting of bad lives, are found by experience to include a very large proportion of persons of the best type of life insured under the Act. The vast majority of insured persons have already joined Approved Societies,

and the residue have for the most part refrained from joining from reasons which have nothing to do with their state of health.

62. As to the persons admitted without medical examination to societies, they constitute such an overwhelming majority of all the persons who have been so admitted (probably 80 per cent.) that it would be impossible to make any discrimination in respect of them.

63. The whole of the persons falling within either category are persons who are subject to the test of being in work at the time of admission, and the great bulk of them are the ordinary lives of the community.

64. It would be impracticable to provide, as appears to be suggested by the deputation, that medical practitioners should be remunerated in respect of either of these classes of insured persons, taken as a whole, upon different terms from those applicable to the insured generally.

XIV.—PAYMENT FOR SANATORIUM BENEFIT.

55. The deputation were anxious that it should be made clear that the 6*d.* drawn from the Sanatorium Benefit Fund to defray the expense of the domiciliary treatment of insured persons suffering from tuberculosis would be paid in respect of attendance upon insured persons only, and would not include any obligation to treat their dependants. This has throughout been the intention of the Government, as already stated by Mr. Masterman in the House of Commons.

XV.—MEDICAL REPRESENTATION ON INSURANCE COMMITTEES.

56. The deputation asked that the medical members of each Insurance Committee should constitute not less than one-tenth of the whole Committee. The Government accede to this request. The Insurance Commissioners will include among these members of each Committee whom they appoint such number of medical members in each case as, together with the members appointed by the profession and by the local authorities, will make the total number of medical members at least one-tenth of the whole Committee. In making these appointments they will consider any names suggested by the Local Medical Committee of the area.

THE SPECIAL MEETING OF THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

A special meeting of the Council of the British Medical Association was held on Dec. 4th to consider the Memorandum of the Chancellor of the Exchequer, arising out of his interviews with the five special representatives of the Association, and the Report thereon of the State Sickness Insurance Committee.

The Council, after a long and careful debate, issued a report to the Divisions embodying the interpretations put upon the Memorandum by the State Sickness Insurance Committee, as well as the representations made to Mr. Lloyd George by the deputation of five.

The Council decided that a vote should be taken in the manner agreed upon at the last meeting of the Representative Body; that the votes should be returned to the head office by Dec. 18th, and should be counted on Dec. 19th; and further that a special meeting of the Representative Body should be held on Saturday, the 21st.

Medical News.

THE following medical men have been elected upon the council of the British Fire Prevention Committee: Sir J. Cockburn, K.C.M.G., M.D. Lond., Major R. J. Maitland Coffin, F.R.C.P. Edin. (as one of the honorary medical officers), and Dr. R. W. Henderson.

UNIVERSITY OF LONDON: A CLUB FOR GRADUATES AND OFFICERS.—A meeting was held at the University on Foundation Day (Nov. 28th), the principal, Sir Henry Miers, presiding, to consider the question of establishing a club for graduates, teachers, and officers of the University. In the letter convening the meeting it was stated that the Senate, while disapproving of the formation of a social club of which men and women undergraduates could become members, would welcome the establishment of a club for graduates, teachers, and officers, and would be prepared to consider an application for an annual subvention if the premises provided satisfactory accommodation for the meetings and business of undergraduates' societies and for other university purposes. A resolution moved by Mr. Wickham Hurd, LL.B., proposing the establishment of a club on the general lines approved by the Senate was carried unanimously, and a committee was appointed to consider the best means of carrying the resolution into effect, with instructions that the club should be a members' club in preference to a proprietary club. The committee are to report to another general meeting. It was generally considered that the annual subscription should be moderate, and that every effort should be made to meet the requirements of provincial members, of whom it was hoped that a large number would join. The committee were, however, requested to consider and report on alternative schemes.

THE Penal Reform League will hold their annual meeting at Caxton Hall, Westminster, on Friday next, Dec. 13th, at 8 P.M., when Professor Sir John MacDonell will take the chair.

THE next meeting of the Hunterian Society, a clinical and pathological evening, will be held on Wednesday, Dec. 11th, at 9 P.M., at St. Bartholomew's Hospital, by kind permission of the hospital authorities.

THE annual festival dinner of the West Ham and Eastern General Hospital will be held at the Hamilton Hall, Liverpool-street Hotel, on Thursday, Dec. 12th, at 7.30 P.M., when the chair will be taken by the Marquis of Winchester.

ROYAL SURGICAL AID SOCIETY.—To celebrate the jubilee of the Royal Surgical Aid Society a luncheon was held at Cannon-street Hotel on Dec. 3rd, when Lord Aberdeen presided. The society, which was established in 1862, is now the largest to supply all kinds of surgical appliances to the poor, irrespective of creed, and the committee is making an appeal for donations. Since its foundation the society has supplied 750,000 appliances. The first year's income was £240; this year it was £27,469. The membership is 8,000. In the afternoon of the same day the annual meeting of the society was held at the Mansion House.

THE PAUL PHILIP REITLINGER PRIZE.—The prize offered this year by the University of London for an essay embodying the result of some research work on a medical subject, has been awarded to Frederick James Fitzmaurice Barrington, M.S., University College Hospital Medical School, for an essay on the Innervation of the Bulbo-urethral Glands and their Histological Changes during Activity. The prize, which is of the value of £30, was founded with funds given to the University by Mr. Albert Reitlinger in memory of his son, a student of St. George's Hospital Medical School, who died on Dec. 3rd, 1911. Next year the prize will be awarded for the best essay on the influence of the conception of evolution on moral or social philosophy.

THE SOCIETY OF APOTHECARIES.—The annual Lord Mayor's Day dinner of the society—always a most pleasant gathering—was held on Nov. 29th at Apothecaries' Hall under the chairmanship of Mr. W. Bramley Taylor, the Master. The company included the Lord Mayor and Sheriffs of London, Sir Rickman J. Godlee (President of the Royal College of Surgeons of England), the Dean of St. Paul's, Sir W. Watson Cheyne (President of the Medical Society of London), Dr. Frederick Taylor, Mr. G. H. Makins, Dr. F. de Havilland Hall, Sir William Christie, Dr. J. A. Ormerod, Mr. Charles Stonham, and Mr. Mowbray Upton (clerk of the society). After the loyal and civic toasts had been honoured the senior warden, Dr. Martindale C. Ward, in proposing the toast of "The Royal Colleges of Physicians and Surgeons," dwelt on the need for unity in the profession, and paid a tribute to the help given by the Colleges. Dr. Frederick Taylor, who responded for the Royal College of Physicians, said amidst applause that the Government would have done far better if it had had more trust in the medical profession, which was always pressing forward in the interest of the public. Sir Rickman J. Godlee, replying on behalf of the Royal College of Surgeons, declared that the coöperation of the two Colleges and the Society of Apothecaries had been of advantage in the recent trying times. In his opinion the most important thing for the profession to do at the present moment was to demand an alteration in the representation of insured persons upon the Local Insurance Committees, so that medical men should not be thrown back into the hands of the friendly societies. The toast of "The Society of Apothecaries" was proposed in a humorous speech by Sir W. Watson Cheyne, who, among other amusing digressions, told how a stranger had once mistaken him for a Scotsman. The Master, in reply to the toast, claimed that the society was doing its duty, both as a City guild and as an educational body, and, whilst continuing its social and benevolent activities,

was endeavouring to uphold the profession in its struggle for freedom and fair treatment. The health of "The Visitors" was proposed by the Junior Warden, Mr. Meredith Townsend, and responded to by Dr. Inge, the Dean of St. Paul's. The enjoyment of the evening was greatly added to by the musical programme, which included charming songs by Miss Bramley Taylor, daughter of the Master.

BRITISH LYING-IN HOSPITAL.—With the approval of King Edward's Hospital Fund for London and the Charity Commissioners an amalgamation of this hospital with the Home for Mothers and Babies, Woolwich, has been provisionally arranged under the combined title of the British Hospital for Mothers and Babies. The subtitle of the latter institution, National Training School for District Midwives, will be retained, and the joint hospital will occupy a new building which is shortly to be erected at Woolwich for the purpose.

THE SWINEY LECTURES ON GEOLOGY.—The first of these lectures, which are delivered in connexion with the British Museum (Natural History), will be delivered by Dr. T. J. Jehu in the Lecture Theatre of the Victoria and Albert Museum, South Kensington, to-day (Saturday, Dec. 7th). The course, consisting of 12 lectures on the Record of Life as Revealed in the Rocks, will be continued on Mondays, Thursdays, and Saturdays, at 3 P.M., from Saturday, Dec. 7th, to Saturday, Dec. 21st (inclusive), and from Saturday, Jan. 4th, to Monday, Jan. 13th (inclusive). The lectures will be illustrated by lantern slides and limelight, and admission is free.

THE NATIONAL DENTAL HOSPITAL.—The annual dinner in connexion with this hospital was held on Nov. 29th, at the Trocadéro Restaurant, when Sir John Rose Bradford, M.D., F.R.S., K.C.M.G., occupied the chair. In proposing the toast of "The National Dental Hospital and College," the chairman stated that a recent visit he had made to the hospital had impressed him in regard to the efficient equipment now provided for the study of dentistry. He recognised the importance of this, considering how much medicine owed to the teachings of dental surgery. The study of dental diseases had opened the eyes of clinicians to some very important relationships between disease and the conditions of the mouth. It was now well known that there could be big issues attending an apparently trivial infection in that cavity. Proceeding, he referred to the great part medicine had played in rendering fit for the habitation of man certain tropical districts hitherto impossible to live in, and it was a question even with this great advance whether a man could successfully face the tropical life unless he had sound teeth in a healthy mouth. He congratulated them on belonging to a profession which had not only clinical interests but scientific interests also. The Dean (Mr. Sidney Spokes) replied. He was able to say that the progress of the National Dental Hospital was satisfactory. The number of patients yearly increased. During the past year the work of the students and staff was heavy, no less than 20,000 patients having received treatment. They were quite satisfied with the examination returns. He concluded a good and interesting speech with a reference to the absorption of the school by the London University, and the question of amalgamating the school with a general hospital, University College having been suggested in this connexion. The toast of "The Past and Present Students" was given by Dr. J. W. Pare, who said it was gratifying to record that their old pupils sent their sons for their dental education to their old school. This was responded to first by Mr. R. R. Ward, who urged the importance of all dental students taking full diplomas, and secondly by Mr. E. N. Perham, who claimed a state of efficiency of the teaching facilities at their school which compared favourably with any other similar institution. Mr. Francis R. Smyth welcomed the visitors in fitting words, and Sir Alfred Pearce Gould replied in a speech in which he congratulated the school on its prosperity. He thought they might look with confidence to the future. Whatever rumours there were of fresh constitutions, organisations, and requirements of study, nothing could disturb the good work of the schools. There need be no anxiety, he added, in regard to the forthcoming report of the Royal Commission on medical education. He was very pleased with the hearty way in which the old students supported their hospital and college. The concluding toast of "The Chairman" was proposed by the Dean, and elicited a graceful acknowledgment from the chair.

A CONVERSAZIONE will be held by the London Dermatological Society to-day (Dec. 7th), at 8 P.M., at 49, Leicester-square, London, W.C.

ROYAL METEOROLOGICAL SOCIETY.—The opening meeting of this society for the session was held on Nov. 20th at the Surveyors' Institution, Great George-street, Westminster, Dr. H. N. Dickson, the President, being in the chair, when Dr. H. R. Mill, Director of the British Rainfall Organisation, read a paper on the Unprecedented Rainfall in East Anglia on August 26th last.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. F. Giulini, of Nuremberg, court councillor.—Dr. Richard Müller, a distinguished Berlin otologist, formerly for many years assistant to Prof. Trautmann. His age was only 48.—Dr. Wolfgang Siegel, bath physician in Reichenhall, aged 37.—Dr. Friedrich Müller, formerly senior physician to the Augsburg Hospital, at the age of 85. His post has been for several years filled by one of his sons, while another son is a distinguished Munich physician.—Dr. Kyritz, a German naval staff-surgeon, who succumbed to an attack of diphtheria in Chunking, China, where he was on duty.—Dr. Carl Seydel, emeritus professor of forensic medicine in the University of Königsberg, aged 73. He was for many years *privat-docent* of midwifery, but afterwards devoted himself to medico-legal studies and was appointed extraordinary professor in 1891.

DONATIONS AND BEQUESTS.—Under the mutual will of the late Misses Mary, Hannah, and Helen Dalgety and Mrs. Isabella Dalgety the testamentary bequests include £2000 each to the Edinburgh Destitute Sick S[ociety] and the Longmore Hospital for Incurables. The r[esidue] of the joint estate is bequeathed to the Edinburgh R[oyal] mary for the establishment or endowment of a called the "Harry Dalgety Ward."—The late Olivier has left by will £1000 to the Clinical Women and Children, Cheetham, Manchester, ment of a "Louise Olivier Cot." The resid[ue] is left in equal shares to various institut[ions] the National Society for the Prevention Children and the General Hospital and Disp[ensary] Children, Pendlebury, Manchester.—The Hal[e] will receive £600 under the will of the late Mis[s] —Mr. Austen Chamberlain has received £5[00] British India Steam Navigation Company toward[s] of £100,000 which he is raising for the Londo[n] of Tropical Medicine.—The late Mr. A. W. Copp[in] L.R.C.P. & S. Edin., of Bath, who left estate valued about £16,000, after distributing some charitable legacies, bequeathed the one-sixth of the residue of his property, subject to his wife's life interest, to be ultimately given to the Royal Medical Benevolent Fund.

A TUBERCULOSIS PLAY IN LONDON.—An interesting play in support of the crusade against consumption was produced on Nov. 27th at the Royal Court Theatre by the Women's Imperial Health Association and the Women's National Health Association of Ireland. The moral of the play is that no one need despair on account of poverty or ill-health; and a conflict rages between Ignorance, Squalor, Worry-worry, and Purity, Love, Common Sense, and Sunshine, the battlefield being a poor Irish cottage. The part of the little Irish girl to whom the good fairies reveal themselves was cleverly played by Miss Florrie Ryan. The Royal Hospital for Diseases of the Chest, City-road, the City of London Hospital for Diseases of the Chest, Victoria Park, and St. Luke's Hospital for Consumption sent nurses to sell programmes. The theatre was crowded. Among those present were the Earl and Countess of Aberdeen, who came over from Dublin to see the performance; Lord and Lady Haddo, Miss Violet Asquith, Lady Duckworth, Lady Critchett, and Lady Mackenzie Davidson. Muriel Viscountess Helmsley, president of the Women's Imperial Health Association, was unable to be present on account of ill-health. The prologue was most sympathetically and charmingly spoken by Miss Irene Vanbrugh, who indicated the keynote of the play—the Triumph of Knowledge over Ignorance and the consequent

defeat of the demon of Tuberculosis. All concerned in the performance deserve praise for their public-spirited effort to drive home lessons of national importance.

GLASGOW UNIVERSITY CLUB.—The semi-annual dinner of this club took place on Nov. 29th at the Trocadéro, the chair being taken by Professor Dudley J. Medley. Among those present were Sir Donald MacAlister, Surgeon-General Babtie, V.C., and a considerable number of medical men. The chairman, in proposing the toast of "The University and the Club," congratulated the General Council of the University on restoring good relations between the University and its graduates, a condition which had not always existed in the past. He referred to the extension of the University union, the provision of the athletic ground, the appointment of an adviser in the faculty of arts, and the provision of University hostels. He mentioned also the closer knitting of the bonds between modern universities and the life of the community and of their work in the training of the democracy for effective citizenship and in the inculcation upon every one of the duty of public service. In this connexion he spoke of the university spirit and the different and broadened outlook upon life which it bestowed, which was the reason why such a large number of administrative officers of the empire were selected from among university men. Speaking of the awakened interest of the masses in this matter he mentioned Ruskin College, at Oxford, as an indication of the almost pathetic desire on the part of the labouring classes to find out for themselves in what this mysterious claim on public life of the university outlook consisted. Dr. C. O. Hawthorne, who proposed the "Guests," said that if the number of the hosts present was not large it was due to the fact that a large proportion of members of the club were medical men, who had had their attention diverted of late from their proper functions—which, of course, included dining—by the consideration of the problems raised by the threatened change of their positions from practitioners to Government officials. It was, he said, to ask a profession to dine at ease while Nero was with its destinies. Mr. Francis Henderson, of Ard, and spoke of the benefits accruing to the ty from the University. Sir Henry Craik, proposed the health of the chairman, to which replied.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Select Committee on Patent Medicines.

The Select Committee of the House of Commons on Patent Medicines took further evidence on Thursday, Nov. 28th, from the point of view of the owners and vendors of proprietary and patent preparations.

Mr. J. C. UMNEY, who gave evidence at a previous sitting, was cross-examined.

Mr. LYNCH: Can you mention any case of the proprietor of a patent medicine making a valuable discovery or doing anything more than trimming up the inventions and discoveries of other people?

Mr. UMNEY: That depends upon what you mean by "valuable discovery." These men have discovered new combinations of drugs which have given certain definite properties and values to their preparations.

Mr. LYNCH: The maker of a proprietary medicine uses only one formula for his preparation, which he offers to all, quite irrespective of the personal idiosyncrasies of the patient?

Mr. UMNEY: Of course, I do not deny the value of diagnosis, and it is always open to people to seek advice as to whether any proprietary medicine will be beneficial to them or not. Witness went on to say that the public were not harmed by the present trade in proprietary medicines, so far as they were sold by reputable people. He quite admitted that remedies which claimed to cure cancer, tuberculosis, diabetes, and some other diseases should be put under certain restrictions. These diseases should not be treated otherwise than by the medical profession.

Dr. CHAPPLE: Suppose that it were possible to-morrow to abolish all existing proprietary medicines, who would suffer most?

Mr. UMNEY: The public.

Dr. CHAPPLE: Who would benefit most?

Mr. UMNEY: The medical profession.

Dr. CHAPPLE: Do you really suggest that if you abolish patent remedies for simple ailments the people who now use them would go to medical men?

Mr. UMNEY: A good many of them will go to medical men if the Insurance Act comes into operation.

The Committee adjourned.

The Mental Deficiency Bill.

The Standing Committee of the House of Commons which has been considering the Mental Deficiency Bill has finished its labours so far as this session is concerned. The Bill has been ordered to be reported to the House, accompanied by a statement that the Committee has not found it possible to consider all the clauses. Mr. MCKENNA, the Home Secretary, in making a statement of the probable cost of the Bill to the local authorities, said that it would take two or three years to bring it into full operation, and if the grants now contemplated were not sufficient to carry it out, it would then be the time to reconsider the matter. One interesting announcement was made by the Home Secretary. It was to the effect that negotiations were going on with a view to having a separate Mental Deficiency Bill for Scotland. As has already been intimated, the Government intends to reintroduce the Mental Deficiency Bill at an early stage next session.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 27TH.

Medical Men and the Insurance Act.

Sir J. D. REES asked the Secretary to the Treasury whether, in the negotiations now proceeding between the Treasury and the medical profession, it was to be understood that he was prepared to guarantee 7s. to the doctors, in consideration of their submitting themselves in their professional life and conversation to the judgment of Local Medical Committees on which they would have little representation.—Mr. MASTERMAN replied: The answer is in the negative. No medical men are required to submit their professional life and conversation to Local Medical Committees; and so far from local doctors having little representation on Local Medical Committees, these committees are entirely composed of, and appointed by, the local doctors.

Local Panels.

Mr. COOPER asked the Secretary to the Treasury whether, in view of the fact that Section 15 (2) of the National Insurance Act established a right on the part of any insured person of selecting the practitioner by whom he desired to be attended, he would say how this could be carried out in the event of a State medical service being set up.—Mr. MASTERMAN answered: The right of an insured person to select a practitioner on the panel is conditional upon a panel being set up. If in any area the practitioners on the panel are not such as to secure an adequate medical service, the Commissioners may under Section 15 (2) of the Act make such arrangements as they think fit for the treatment of insured persons. A State medical service is amongst the alternatives so open to them, but such a service, including many doctors, might still offer opportunities of choice by the insured person.

The Funds for Medical Benefit.

Mr. JOHN WARD asked the Secretary to the Treasury whether he would consider the advisability of now deciding to place the sum intended for medical benefit under the Insurance Act, together with the proposed additional grant of £1,600,000 under the National Insurance Act, to the credit of the insured members so that they might make their own arrangements with the medical profession for medical benefits, either through the Local Insurance Committee or their Approved Society.—Mr. MASTERMAN said in reply: It is open to insured persons to apply to their Local Insurance Committee to be allowed to make their own arrangements for receiving medical attendance under Section 15 (3) of the Act.

Tuberculous Children in Regent's Park.

Mr. KING asked the honourable Member for St. George's-in-the-East, as representing the First Commissioner of Works, whether the bandstand in Regent's Park had been used during the past summer as an open-air school for children in the pre-tuberculous state; and whether it was intended to continue the use of this and similar erections for this purpose.—Mr. WEDGWOOD BENN replied: A class of tuberculous children has been held in Regent's Park for over a year, and the use of the bandstand has been granted to them. No change is proposed. No applications of a similar nature have been received.

Schemes for Dealing with Tuberculosis.

Mr. ASTOR asked the President of the Local Government Board what counties and county boroughs had through their councils submitted schemes for dealing with tuberculosis which had been approved by the Local Government Board.—Mr. BURNS wrote in reply: The following councils of counties and county boroughs have submitted schemes the general lines of which the Board approve:—County councils: Cornwall, Cumberland, Derbyshire, Dorsetshire, Durham, Essex, Gloucestershire, Kent, Leicestershire, Holland (parts of), Kesteven (parts of), Lindsey (parts of), Middlesex, Somerset, Surrey, Worcestershire, Yorks (West Riding). County borough councils: Birkenhead, Birmingham, Bradford, Brighton, Chester, Derby, Eastbourne, Gloucester, Ipswich, St. Helens, Sheffield, Stockport, Stoke-on-Trent, Wallasey, Worcester, and York.

The Metropolitan Asylums Board and Tuberculosis Treatment.

Mr. TOUCHE asked the President of the Local Government Board whether the Metropolitan Asylums Board had an institution at Littlehampton set apart entirely for tuberculosis cases and a portion, if not the whole, of another home at Margate used for a similar purpose.—Mr. BURNS (in a written answer) replied: The Metropolitan Asylums Board have an institution at Rustington, near Littlehampton, which provides accommodation for 120 early cases of pulmonary tuberculosis among pauper children. They have also an institution at Margate with accommodation for 130 pauper children, in which a certain number of surgical cases of tubercular bones and glands are received.

Epidemic at the Foundling Hospital.

Sir HILDRED CARLILE asked the President of the Local Government Board whether he could give any information as to the extent and nature of the epidemic which occurred at the Foundling Hospital during last summer; whether such epidemic was now over; and what steps had been taken to prevent its recurrence.—Mr. BURNS furnished the following written answer: The epidemic referred to was an outbreak of diphtheria of a mild type. The disease appeared in August last, and there have been in all 70 cases, all of which were removed to

was endeavouring to uphold the profession in its struggle for freedom and fair treatment. The health of "The Visitors" was proposed by the Junior Warden, Mr. Meredith Townsend, and responded to by Dr. Inge, the Dean of St. Paul's. The enjoyment of the evening was greatly added to by the musical programme, which included charming songs by Miss Bramley Taylor, daughter of the Master.

BRITISH LYING-IN HOSPITAL.—With the approval of King Edward's Hospital Fund for London and the Charity Commissioners an amalgamation of this hospital with the Home for Mothers and Babies, Woolwich, has been provisionally arranged under the combined title of the British Hospital for Mothers and Babies. The subtitle of the latter institution, National Training School for District Midwives, will be retained, and the joint hospital will occupy a new building which is shortly to be erected at Woolwich for the purpose.

THE SWINEY LECTURES ON GEOLOGY.—The first of these lectures, which are delivered in connexion with the British Museum (Natural History), will be delivered by Dr. T. J. Jehu in the Lecture Theatre of the Victoria and Albert Museum, South Kensington, to-day (Saturday, Dec. 7th). The course, consisting of 12 lectures on the Record of Life as Revealed in the Rocks, will be continued on Mondays, Thursdays, and Saturdays, at 3 P.M., from Saturday, Dec. 7th, to Saturday, Dec. 21st (inclusive), and from Saturday, Jan. 4th, to Monday, Jan. 13th (inclusive). The lectures will be illustrated by lantern slides and limelight, and admission is free.

THE NATIONAL DENTAL HOSPITAL.—The annual dinner in connexion with this hospital was held on Nov. 29th, at the Trocadéro Restaurant, when Sir John Rose Bradford, M.D., F.R.S., K.C.M.G., occupied the chair. In proposing the toast of "The National Dental Hospital and College," the chairman stated that a recent visit he had made to the hospital had impressed him in regard to the efficient equipment now provided for the study of dentistry. He recognised the importance of this, considering how much medicine owed to the teachings of dental surgery. The study of dental diseases had opened the eyes of clinicians to some very important relationships between disease and the conditions of the mouth. It was now well known that there could be big issues attending an apparently trivial infection in that cavity. Proceeding, he referred to the great part medicine had played in rendering fit for the habitation of man certain tropical districts hitherto impossible to live in, and it was a question even with this great advance whether a man could successfully face the tropical life unless he had sound teeth in a healthy mouth. He congratulated them on belonging to a profession which had not only clinical interests but scientific interests also. The Dean (Mr. Sidney Spokes) replied. He was able to say that the progress of the National Dental Hospital was satisfactory. The number of patients yearly increased. During the past year the work of the students and staff was heavy, no less than 20,000 patients having received treatment. They were quite satisfied with the examination returns. He concluded a good and interesting speech with a reference to the absorption of the school by the London University, and the question of amalgamating the school with a general hospital, University College having been suggested in this connexion. The toast of "The Past and Present Students" was given by Dr. J. W. Pare, who said it was gratifying to record that their old pupils sent their sons for their dental education to their old school. This was responded to first by Mr. R. R. Ward, who urged the importance of all dental students taking full diplomas, and secondly by Mr. E. N. Perham, who claimed a state of efficiency of the teaching facilities at their school which compared favourably with any other similar institution. Mr. Francis R. Smyth welcomed the visitors in fitting words, and Sir Alfred Pearce Gould replied in a speech in which he congratulated the school on its prosperity. He thought they might look with confidence to the future. Whatever rumours there were of fresh constitutions, organisations, and requirements of study, nothing could disturb the good work of the schools. There need be no anxiety, he added, in regard to the forthcoming report of the Royal Commission on medical education. He was very pleased with the hearty way in which the old students supported their hospital and college. The concluding toast of "The Chairman" was proposed by the Dean, and elicited a graceful acknowledgment from the chair.

A CONVERSAZIONE will be held by the London Dermatological Society to-day (Dec. 7th), at 8 P.M., at 49, Leicester-square, London, W.C.

ROYAL METEOROLOGICAL SOCIETY.—The opening meeting of this society for the session was held on Nov. 20th at the Surveyors' Institution, Great George-street, Westminster, Dr. H. N. Dickson, the President, being in the chair, when Dr. H. R. Mill, Director of the British Rainfall Organisation, read a paper on the Unprecedented Rainfall in East Anglia on August 26th last.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. F. Giulini, of Nuremberg, court councillor.—Dr. Richard Müller, a distinguished Berlin otologist, formerly for many years assistant to Prof. Trautmann. His age was only 48.—Dr. Wolfgang Siegel, bath physician in Reichenhall, aged 37.—Dr. Friedrich Müller, formerly senior physician to the Augsburg Hospital, at the age of 85. His post has been for several years filled by one of his sons, while another son is a distinguished Munich physician.—Dr. Kyritz, a German naval staff-surgeon, who succumbed to an attack of diphtheria in Chunking, China, where he was on duty.—Dr. Carl Seydel, emeritus professor of forensic medicine in the University of Königsberg, aged 73. He was for many years *privat-docent* of midwifery, but afterwards devoted himself to medico-legal studies and was appointed extraordinary professor in 1891.

DONATIONS AND BEQUESTS.—Under the mutual will of the late Misses Mary, Hannah, and Helen Dalgety and Mrs. Isabella Dalgety the testamentary bequests include £2000 each to the Edinburgh Destitute Sick Society and the Longmore Hospital for Incurables. The residue of the joint estate is bequeathed to the Edinburgh Royal Infirmary for the establishment or endowment of a ward to be called the "Harry Dalgety Ward."—The late Miss Louise Olivier has left by will £1000 to the Clinical Hospital for Women and Children, Cheetham, Manchester, for the endowment of a "Louise Olivier Cot." The residue of the estate is left in equal shares to various institutions, including the National Society for the Prevention of Cruelty to Children and the General Hospital and Dispensary for Sick Children, Pendlebury, Manchester.—The Halifax Infirmary will receive £600 under the will of the late Miss A. S. Jarry.—Mr. Austen Chamberlain has received £500 from the British India Steam Navigation Company towards the fund of £100,000 which he is raising for the London School of Tropical Medicine.—The late Mr. A. W. Coppinger, L.R.C.P. & S. Edin., of Bath, who left estate valued at about £16,000, after distributing some charitable legacies, bequeathed the one-sixth of the residue of his property, subject to his wife's life interest, to be ultimately given to the Royal Medical Benevolent Fund.

A TUBERCULOSIS PLAY IN LONDON.—An interesting play in support of the crusade against consumption was produced on Nov. 27th at the Royal Court Theatre by the Women's Imperial Health Association and the Women's National Health Association of Ireland. The moral of the play is that no one need despair on account of poverty or ill-health; and a conflict rages between Ignorance, Squalor, Worry-worry, and Purity, Love, Common Sense, and Sunshine, the battlefield being a poor Irish cottage. The part of the little Irish girl to whom the good fairies reveal themselves was cleverly played by Miss Florrie Ryan. The Royal Hospital for Diseases of the Chest, City-road, the City of London Hospital for Diseases of the Chest, Victoria Park, and St. Luke's Hospital for Consumption sent nurses to sell programmes. The theatre was crowded. Among those present were the Earl and Countess of Aberdeen, who came over from Dublin to see the performance; Lord and Lady Haddo, Miss Violet Asquith, Lady Duckworth, Lady Critchett, and Lady Mackenzie Davidson. Muriel Viscountess Helmsley, president of the Women's Imperial Health Association, was unable to be present on account of ill-health. The prologue was most sympathetically and charmingly spoken by Miss Irene Vanbrugh, who indicated the keynote of the play—the Triumph of Knowledge over Ignorance and the consequent

defeat of the demon of Tuberculosis. All concerned in the performance deserve praise for their public-spirited effort to drive home lessons of national importance.

GLASGOW UNIVERSITY CLUB.—The semi-annual dinner of this club took place on Nov. 29th at the Trocadéro, the chair being taken by Professor Dudley J. Medley. Among those present were Sir Donald MacAlister, Surgeon-General Babtie, V.C., and a considerable number of medical men. The chairman, in proposing the toast of "The University and the Club," congratulated the General Council of the University on restoring good relations between the University and its graduates, a condition which had not always existed in the past. He referred to the extension of the University union, the provision of the athletic ground, the appointment of an adviser in the faculty of arts, and the provision of University hostels. He mentioned also the closer knitting of the bonds between modern universities and the life of the community and of their work in the training of the democracy for effective citizenship and in the inculcation upon every one of the duty of public service. In this connexion he spoke of the university spirit and the different and broadened outlook upon life which it bestowed, which was the reason why such a large number of administrative officers of the empire were selected from among university men. Speaking of the awakened interest of the masses in this matter he mentioned Ruskin College, at Oxford, as an indication of the almost pathetic desire on the part of the labouring classes to find out for themselves in what this mysterious claim on public life of the university outlook consisted. Dr. C. O. Hawthorne, who proposed the "Guests," said that if the number of the hosts present was not large it was due to the fact that a large proportion of members of the club were medical men, who had had their attention diverted of late from their proper functions—which, of course, included dining—by the consideration of the problems involved by the threatened change of their positions from private practitioners to Government officials. It was, he said, too much to ask a profession to dine at ease while Nero was fiddling with its destinies. Mr. Francis Henderson, of Glasgow, replied, and spoke of the benefits accruing to the city of Glasgow from the University. Sir Henry Craik, K.C.B., M.P., proposed the health of the chairman, to which Professor Medley replied.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Select Committee on Patent Medicines.

THE Select Committee of the House of Commons on Patent Medicines heard further evidence on Thursday, Nov. 28th, from the point of view of the owners and vendors of proprietary and patent preparations.

Mr. J. C. UMNEY, who gave evidence at a previous sitting, was cross-examined.

Mr. LYNCH: Can you mention any case of the proprietor of a patent medicine making a valuable discovery or doing anything more than trimming up the inventions and discoveries of other people?

Mr. UMNEY: That depends upon what you mean by "valuable discovery." These men have discovered new combinations of drugs which have given certain definite properties and values to their preparations.

Mr. LYNCH: The maker of a proprietary medicine uses only one formula for his preparation, which he offers to all, quite irrespective of the personal idiosyncrasies of the patient?

Mr. UMNEY: Of course, I do not deny the value of diagnosis, and it is always open to people to seek advice as to whether any proprietary medicine will be beneficial to them or not. Witness went on to say that the public were not harmed by the present trade in proprietary medicines, so far as they were sold by reputable people. He quite admitted that remedies which claimed to cure cancer, tuberculosis, diabetes, and some other diseases should be put under certain restrictions. These diseases should not be treated otherwise than by the medical profession.

Dr. CHAPPLE: Suppose that it were possible to-morrow to abolish all existing proprietary medicines, who would suffer most?

Mr. UMNEY: The public.

Dr. CHAPPLE: Who would benefit most?

Mr. UMNEY: The medical profession.

Dr. CHAPPLE: Do you really suggest that if you abolish patent remedies for simple ailments the people who now use them would go to medical men?

Mr. UMNEY: A good many of them will go to medical men if the Insurance Act comes into operation.

The Committee adjourned.

The Mental Deficiency Bill.

The Standing Committee of the House of Commons which has been considering the Mental Deficiency Bill has finished its labours so far as this session is concerned. The Bill has been ordered to be reported to the House, accompanied by a statement that the Committee has not found it possible to consider all the clauses. Mr. MCKENNA, the Home Secretary, in making a statement of the probable cost of the Bill to the local authorities, said that it would take two or three years to bring it into full operation, and if the grants now contemplated were not sufficient to carry it out, it would then be the time to reconsider the matter. One interesting announcement was made by the Home Secretary. It was to the effect that negotiations were going on with a view to having a separate Mental Deficiency Bill for Scotland. As has already been intimated, the Government intends to reintroduce the Mental Deficiency Bill at an early stage next session.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 27TH.

Medical Men and the Insurance Act.

Sir J. D. REES asked the Secretary to the Treasury whether, in the negotiations now proceeding between the Treasury and the medical profession, it was to be understood that he was prepared to guarantee 7s. to the doctors, in consideration of their submitting themselves in their professional life and conversation to the judgment of Local Medical Committees on which they would have little representation.—Mr. MASTERMAN replied: The answer is in the negative. No medical men are required to submit their professional life and conversation to Local Medical Committees; and so far from local doctors having little representation on Local Medical Committees, these committees are entirely composed of, and appointed by, the local doctors.

Local Panels.

Mr. COOPER asked the Secretary to the Treasury whether, in view of the fact that Section 15 (2) of the National Insurance Act established a right on the part of any insured person of selecting the practitioner by whom he desired to be attended, he would say how this could be carried out in the event of a State medical service being set up.—Mr. MASTERMAN answered: The right of an insured person to select a practitioner on the panel is conditional upon a panel being set up. If in any area the practitioners on the panel are not such as to secure an adequate medical service, the Commissioners may under Section 15 (2) of the Act make such arrangements as they think fit for the treatment of insured persons. A State medical service is amongst the alternatives so open to them, but such a service, including many doctors, might still offer opportunities of choice by the insured person.

The Funds for Medical Benefit.

Mr. JOHN WARD asked the Secretary to the Treasury whether he would consider the advisability of now deciding to place the sum intended for medical benefit under the Insurance Act, together with the proposed additional grant of £1,600,000 under the National Insurance Act, to the credit of the insured members so that they might make their own arrangements with the medical profession for medical benefits, either through the Local Insurance Committee or their Approved Society.—Mr. MASTERMAN said in reply: It is open to insured persons to apply to their Local Insurance Committee to be allowed to make their own arrangements for receiving medical attendance under Section 15 (3) of the Act.

Tuberculous Children in Regent's Park.

Mr. KING asked the honourable Member for St. George's-in-the-East, as representing the First Commissioner of Works, whether the bandstand in Regent's Park had been used during the past summer as an open-air school for children in the pre-tuberculous state; and whether it was intended to continue the use of this and similar erections for this purpose.—Mr. WEDGWOOD BENN replied: A class of tuberculous children has been held in Regent's Park for over a year, and the use of the bandstand has been granted to them. No change is proposed. No applications of a similar nature have been received.

Schemes for Dealing with Tuberculosis.

Mr. ASTOR asked the President of the Local Government Board what counties and county boroughs had through their councils submitted schemes for dealing with tuberculosis which had been approved by the Local Government Board.—Mr. BURNS wrote in reply: The following councils of counties and county boroughs have submitted schemes the general lines of which the Board approve:—County councils: Cornwall, Cumberland, Derbyshire, Dorsetshire, Durham, Essex, Gloucestershire, Kent, Leicestershire, Holland (parts of), Kesteven (parts of), Lindsey (parts of), Middlesex, Somerset, Surrey, Worcestershire, Yorks (West Riding). County borough councils: Birkenhead, Birmingham, Bradford, Brighton, Chester, Derby, Eastbourne, Gloucester, Ipswich, St. Helens, Sheffield, Stockport, Stoke-on-Trent, Wallasey, Worcester, and York.

The Metropolitan Asylums Board and Tuberculosis Treatment.

Mr. TOUCHE asked the President of the Local Government Board whether the Metropolitan Asylums Board had an institution at Littlehampton set apart entirely for tuberculosis cases and a portion, if not the whole, of another home at Margate used for a similar purpose.—Mr. BURNS (in a written answer) replied: The Metropolitan Asylums Board have an institution at Rustington, near Littlehampton, which provides accommodation for 120 early cases of pulmonary tuberculosis among pauper children. They have also an institution at Margate with accommodation for 130 pauper children, in which a certain number of surgical cases of tubercular bones and glands are received.

Epidemic at the Foundling Hospital.

Sir HILDRED CARLILE asked the President of the Local Government Board whether he could give any information as to the extent and nature of the epidemic which occurred at the Foundling Hospital during last summer; whether such epidemic was now over; and what steps had been taken to prevent its recurrence.—Mr. BURNS furnished the following written answer: The epidemic referred to was an outbreak of diphtheria of a mild type. The disease appeared in August last, and there have been in all 70 cases, all of which were removed to

the isolation hospital. There has been no fresh case since Nov. 6th, and all but 19 of the cases have returned from the hospital. None of the cases have been fatal. The governors of the hospital communicated at the beginning of the outbreak with the medical officer of health of St. Pancras, who is satisfied with the methods adopted for dealing with the outbreak.

Hospitals and the Insurance Act.

Mr. COOPER asked the Chancellor of the Exchequer what arrangements he had made for insured persons requiring surgical and other treatment which could only be adequately given in hospitals and similar institutions, seeing that insured persons were no longer eligible for hospital treatment as necessitous persons.

Sir JOHN LONSDALE asked the right honourable gentleman whether he was aware that it was estimated that of the insured persons who would claim medical benefit after Jan. 15th next at least 30,000 a week would need for their adequate medical treatment hospital provision; and what provision would be made for these persons in the event of their being unable or unwilling to secure treatment in the existing charitable institutions.—Mr. MASTERMAN (Secretary to the Treasury) answered: Those questions would appear to be based on a misapprehension. Surgical and other cases which cannot consistently with the interests of the patient be properly undertaken by a practitioner on a panel set up under Section 15 are not affected by the Act, and there would appear to be no reason why such cases should be less eligible in the future than in the past for treatment in hospitals and similar institutions. I may state that the average number of in-patients present in the hospitals at any one time would appear to be only a small fraction of the number suggested in the question.

Sir JOHN LONSDALE: Is the right honourable gentleman aware that the hospitals have suffered considerably from the withdrawal of subscriptions, and will he not consider the necessity of entering into business arrangements with the hospitals for the treatment of insured persons?—Mr. MASTERMAN: Business arrangements can be entered into between the hospitals and the Approved Societies in the interests of the insured persons under the Act. I have no information as to any decrease in the voluntary subscriptions to the hospitals.

Sir C. KINLOCH COOKE: Would not the funds of Approved Societies go down in the event of such arrangements being made?—Mr. MASTERMAN: Approved Societies would arrange, as some do at present, to contribute a certain amount to the funds of a hospital in return for a certain number of patients being treated there.

THURSDAY, NOV. 28TH.

Sanatorium Accommodation.

Mr. ASTOR asked the President of the Local Government Board how many beds would be required in the near future in sanatoria, and also how many beds would be required, in addition to Poor-law beds, in hospitals, for the treatment of consumptives in England and Wales.—Mr. BURNS wrote in reply: Certain figures are given in the interim report of the Departmental Committee on Tuberculosis with which the honourable Member is, of course, familiar, but for reasons which are indicated in that report the question does not admit of an exact answer.

Sanatorium Benefit in Derby and Sheffield.

Mr. WRIGHT asked the President of the Local Government Board whether a joint scheme for providing sanatoria benefit in the county and boroughs of Derbyshire, Derby, and Sheffield by means, *inter alia*, of a central and branch sanatoria and dispensaries had been finally approved by his Board; and, if so, whether the three authorities concerned had in consequence of the reduction of the 1s. 3d. originally proposed for sanatorium benefit to 9d. and, it followed, of the funds now available for this purpose, decided to abandon their scheme.—Mr. BURNS wrote in answer: The schemes of the Derbyshire county council and Sheffield town council include the provision of a joint sanatorium, and I understand that the town council of Derby are prepared to contract for beds at such a sanatorium. The Local Government Board approve these proposals, and I am not aware that any of the authorities have decided to abandon them.

A Testimonial from Dr. Newsholme.

Mr. JOYNSON-HICKS asked the President of the Local Government Board whether he was aware that Dr. Newsholme, the principal medical officer of the Board, recently gave or re-dated a testimonial to one of the applicants to the appointment of medical officer of health for the City of London; and whether it was in accordance with precedent for an officer of the Local Government Board to give testimonials for appointments in matters which were likely to come under his own jurisdiction.—Mr. BURNS furnished the following written reply: I understand that the applicant referred to included in his testimonials one given to him by Dr. Newsholme before he entered the public service, and dated 1901. The applicant recently called on Dr. Newsholme and asked him for a new testimonial, but Dr. Newsholme, owing to his official position, did not feel at liberty to comply with the request. His action was in accordance with ordinary practice.

MONDAY, DEC. 2ND.

Medical Attendance in Rural Districts under the Insurance Act.

Sir HENRY CRAIK asked the Secretary to the Treasury whether the amount for medical relief allotted to each locality would be based upon the number of insured persons in that locality; and, if so, whether an additional amount would be allotted in the case of rural localities where the amount of travelling expenses involved in such medical relief must necessarily exceed that which would be incurred in urban districts.—Mr. MASTERMAN replied: The answer to the first part of the question is in the affirmative. The creation of a small special fund for mileage in districts exceptionally sparsely populated is under consideration, but no additional amount will be allotted for mileage in ordinary rural areas, and if a special fund is considered desirable for this purpose it must be formed by an Insurance Committee from the general amount available for medical remuneration within its area.

Sir HENRY CRAIK: Will this money be a special fund separate from that for the remuneration of medical men?

Mr. MASTERMAN: It may be or it may not be. There may be an inclusive fee for mileage or there may be a sum set apart for mileage. That will be within the discretion of the Local Committee.

Medical and Sanatorium Benefits.

Sir J. D. REES asked the Secretary to the Treasury whether the compulsory collections under the National Insurance Act were to be continued, notwithstanding the inability of the Government to provide medical or sanatorium benefits.—Mr. MASTERMAN answered: I know of no reason why contributions should not be continued and benefits forthcoming as provided by the Act.

Sanatorium Benefit.

In reply to Mr. FRED HALL (Dulwich) Mr. MASTERMAN said: It is not at the present time possible to say how many insured persons will during the year 1913 require treatment in sanatoria, in tuberculosis dispensaries, and in other institutions respectively. The cost of treatment in sanatoria varies in different institutions. The amount available out of the National Health Insurance Fund for the institutional treatment of tuberculosis for the ensuing year is estimated at about £450,000.

Major HOPE asked the Secretary to the Treasury whether, as 6d. out of the 1s. 3d. available annually for sanatorium benefit, in respect of each insured person under Clause 16 (2) (*a*) of the National Insurance Act, was to be set aside for payment of medical practitioners, local authorities would contribute towards maintenance of sanatoria and dispensaries one-fourth of the original or of the reduced sum.—Mr. MASTERMAN answered: Local authorities do not contribute any part of the 1s. 3d. per head referred to in the question, nor is it proposed that the contributions of local authorities should bear any fixed proportion to that sum or to the part of it devoted to the cost of treatment in sanatoria or dispensaries.

Answering Sir HENRY CRAIK, Mr. BURNS (President of the Local Government Board) said: Local authorities generally, in preparing their schemes, have made provision for the treatment of non-insured persons suffering from tuberculosis as well as for insured persons. Fifteen dispensaries in the Metropolis have been provisionally approved by the Local Government Board, at which treatment may be obtained by persons whether insured or not insured, and arrangements are in progress for the provision of sanatorium accommodation.

Extra-mural Schools of Medicine in Scotland.

Mr. F. WHYTE asked the Secretary to the Treasury whether, at any time since the proposal of the inclusive fee for Scottish Universities was made, his department had received representations from any university court, senatus, or general council, or from any other body concerned in the affairs of the universities of Scotland, drawing its attention to the effect of that proposal upon the extra-mural schools of medicine attached to those universities.—Mr. MASTERMAN replied: Certain observations have been received with reference to the position of the extra-mural schools as bearing on the question of an inclusive fee in medicine. Such observations, however, relate rather to the difficulty of arriving at an inclusive fee in medicine, having regard to the existence of extra-mural schools, than to the effect of such a fee on those schools.

Teaching Posts in the Indian Medical Colleges.

Dr. ADDISON asked the Financial Secretary to the War Office, as representing the Under-Secretary of State for India, whether the Government adhered to the policy indicated at various times by Lord Morley of appointing, where possible, Indian medical practitioners of sufficiently high standing and experience to teaching posts in the Indian medical colleges, and whether steps were taken to ascertain whether such men were available before filling the newly-created posts in the anatomy and pathology departments in the Grant Medical College, Bombay.—Mr. H. BAKER replied: The Secretary of State adheres to the policy stated in general terms by my honourable friend. As regards the Grant Medical College, I would refer to an answer I gave on the subject in October, which still holds good.

The Ignition of Flannelette Clothes.

In reply to Mr. JOYNSON-HICKS, Mr. ELLIS-GRIFFITH (Under-Secretary of State for the Home Department) said: The only official statistics as to the number of deaths resulting from the ignition of flannelette clothes are those given in the annual returns of the Registrar-General, which are based on coroners' certificates. From the return for 1910 it appears that the number of deaths from burning clothes in that year was 657, and in 67 cases it is stated that the clothes were made of flannelette. The Coroners' Committee inquired into, and reported on, this question a little over two years ago, and in the circumstances I do not think that the appointment of another committee is called for.

Lead Poisoning in South Wales.

Answering Mr. C. DUNCAN, Mr. ELLIS-GRIFFITH said: The number of cases of lead poisoning in spelter works in South Wales reported to the Factory Department since July, 1907, is 77, of which 4 were fatal. Since the beginning of 1910 the number of cases has shown a marked decrease, as compared with the figures for the years 1908 and 1909, the total number being 26, of which one was fatal.

TUESDAY, DEC. 3RD.

Notification of Pulmonary Tuberculosis.

Replying to Lord NINIAN CRICHTON-STUART, Mr. BURNS, President of the Local Government Board, wrote: The notification of all known cases of pulmonary tuberculosis became compulsory in England and Wales on Jan. 1st, 1912, and from that date up to the week ending Nov. 23rd, 1912, 102,100 cases were notified.

Medical Practitioners and the Insurance Act.

Sir PHILIP MAGNUS asked the Chancellor of the Exchequer whether he could now inform the House as to the further proposals he could offer to medical practitioners to enable them to coöperate in providing medical benefit under the National Insurance Act.—Mr. LLOYD GEORGE answered: I am afraid I can add nothing to my reply on Tuesday last to the honourable Member for Devizes.

The Treatment of Tuberculosis.

Sir REGINALD POLE-CAREW asked the President of the Local Government Board how many counties or county boroughs had not yet submitted to the Local Government Board complete schemes for detecting and treating tuberculosis, and how many complete schemes which had been submitted had not yet been approved by the Board.—Mr. BURNS said in reply: Some 60 councils of counties and county boroughs have not yet submitted complete schemes, but 46 of these councils have submitted schemes of a partial or temporary character. Of the 60 complete schemes which have been submitted 27 have not yet been approved by the Board, but in these cases the Board are in communication with the councils either with a view to obtaining

further information or the reconsideration of some feature of the scheme.

Mr. WRIGHT asked the right honourable gentleman how many of the schemes by county and town councils for providing sanatoria benefit and treatment of consumptives, wholly or partly approved by his Board, were based upon the assumption that in addition to the Hobhouse grant there would be available 1s. 3d. per annum per head of assured persons.—Mr. BURNS replied: It is impossible to say what assumptions have been entertained by each local authority which has considered a scheme of institutional treatment, but it may be supposed that local authorities are alive to the situation.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Les Actualités Médicales. Le Radium; son Emploi dans le Traitement du Cancer, des Angiomes, Chéloïdes, Tuberculoses locales et d'autres Affections. Par Louis Wickham, Médecin de Saint-Lazare, et Paul Degrais, Ex-chef de Laboratoire à l'Hôpital Saint-Louis, Chefs de Service au Laboratoire Biologique du Radium, Lauréats de l'Académie de Médecine. Price Fr.1.50.

Nouveau Traité de Chirurgie Clinique et Opératoire. Publié en Fascicules. Sous la Direction de A. Le Dentu et Pierre Delbet. XIV. Maladies du Rachis et de la Moelle. Par Maurice Auvray, Professeur Agrégé à la Faculté, Chirurgien des Hôpitaux, et Albert Mouchet, Chirurgien des Hôpitaux de Paris. Price, paper, Fr.12; boards, Fr.13.50.

ENGELMANN, WILHELM, Leipzig.

Vorträge und Aufsätze über Entwicklungsmechanik der Organismen. Herausgegeben von Wilhelm Roux. Heft XVII. Die Entwicklungsmechanisch-metaplastischen Potenzen der tierischen Gewebe. Von Józef Nusbaum, o.ö. Professor der Zoologie und Vergleichenden Anatomie an der Universität Lemberg. Price M.1.50.

FISCHER, GUSTAV, Jena.

Handbuch der Vergleichenden Physiologie. Herausgegeben von Hans Winterstein in Rostock. Fünfundzwanzigste Lieferung. Band I. Physiologie der Körpersäfte. Physiologie der Atmung. Zweite Hälfte. Bogen 11 bis 20. Price M.5.

Sechsundzwanzigste Lieferung. Band III. Physiologie des Energiewechsels. Physiologie des Formwechsels. Erste Hälfte. Bogen 11 bis 20. Price M.5.

Siebenundzwanzigste Lieferung. Band III. Physiologie des Energiewechsels. Physiologie des Formwechsels. Erste Hälfte. Bogen 21 bis 30. Price M.5.

Achtundzwanzigste Lieferung. Band IV. Physiologie der Reizaufnahme, Reizleitung und Reizbeantwortung. Bogen 53 bis 61. Price M.5.

Handbuch der pathogenen Mikroorganismen. Herausgegeben von Dr. W. Kolle und Dr. A. von Wassermann. Zweite vermehrte Auflage. Einundzwanzigste und zweiundzwanzigste Lieferung. (Bd. I., Seite 881–1068 und Titel, Bd. II., Seite 161–272.) Price M.10.

Atlas der menschlichen Blutzellen. Von Dr. Artur Pappenheim. Supplement-Band. Erste Lieferung. Tafel XXVI.–XXX. Price M.9. Supplement-Band. Zweite Lieferung. Tafel XXXI.–XXXVIII. Price M.11.

FIFIELD, A. C., 13, Clifford's Inn, London, E.C.

The Nature of Woman. By J. Lionel Tayler, M.R.C.S., L.R.C.P., Member of the Royal Sanitary Institute, London University; Extension and Tutorial Lecturer on Biology and Sociology. Price 3s. 6d. net.

FORBES AND COMPANY, 443, S. Dearborn-street, Chicago.

Himself: Talks with Men Concerning Themselves. By E. B. Lowry, M.D., and Richard J. Lambert, M.D. Price $1 net.

HARPER AND BROTHERS, London and New York.

Elements and Electrons. By Sir William Ramsay, K.C.B., F.R.S., Price 2s. 6d. net.

Rough Stone Monuments and their Builders. By T. Eric Peet, Formerly Scholar of Queen's College, Oxford; lately Craven Fellow in the University of Oxford and Pelham Student at the British School of Rome. Price 2s. 6d. net.

JACK, T. C. AND E. C., 67, Long Acre, London, W.C., and Edinburgh. DODGE PUBLISHING CO., New York.

Hypnotism and Self-Education. By A. M. Hutchison, M.D. Price, cloth, 6d. net.

The Baby: A Mother's Book by a Mother. By a University Woman. Price, cloth, 6d. net.

Marriage and Motherhood: A Wife's Handbook. By Hugh S. Davidson, M.B., F.R.C.S. Edin. Price, cloth, 6d. net.

JOURNAL OF NERVOUS AND MENTAL DISEASE PUBLISHING COMPANY, New York.

Nervous and Mental Disease Monograph. Series No. 13. The History of the Prison Psychoses. By Dr. Paul Nitsche, Dresden, and Dr. Karl Wilmanns, Heidelberg. Authorised Translation by Francis M. Barnes, Jr., M.D., Senior Assistant Physician, Government Hospital for the Insane, Washington, D.C., and Bernard Glueck, M.D., Senior Assistant Physician, Government Hospital for the Insane, Washington, D.C. With an Introduction by William A. White, M.D. Price $1.25.

LONGMANS, GREEN AND CO., London, New York, Bombay, and Calcutta.

Practical Measurements in Radio-Activity. By W. Makower, M.A., D.Sc., Lecturer and Demonstrator in Physics in the University of Manchester, and H. Geiger, Ph.D., Lecturer in Physics in the University of Manchester. Price 5s. net.

A Dictionary of Applied Chemistry. By Sir Edward Thorpe, C.B., LL.D., F.R.S., Emeritus Professor of Chemistry, Imperial College of Science and Technology, South Kensington, London. Assisted by Eminent Contributors. Revised and enlarged edition. In five volumes. Vol. III. Price 45s. net per volume.

MALOINE, A., Paris.

L'Organisme dans les Infections. Aperçus nouveaux d'Hématologie et de Pyrétologie. Préface de M. Louis Renon, Professeur agrégé à la Faculté de Médecine de Paris, Médecin de l'Hôpital Necker. Price not stated.

MARHOLD, CARL, Halle a.S.

Ueber Behandlung der Hauttuberkulose. Von Prof. Dr. Doutrelepont in Bonn. Price M.1.20.

Die Therapie des Ekzems. Von Geh. Hofrat Dr. Theodor Veiel und Dr. Fritz Veiel in Cannstatt. Price M.1.20.

Die Tuberkulose der Harnorgane. Von Dr. Hans Wildbolz, Privatdozent in Bern. Price M.1.50.

Kohlenhydratkuren bei Diabetes. Von. Prof. Dr. Georg Rosenfeld in Breslau. Price M.1.80.

Aufgaben der Glaukombehandlung unter der Kontrolle des Schiötzschen Tonometers. Von. Prof. v. Hippel in Halle a.S. Price M.1.20.

Beitrag zur Beurteilung und Behandlung des konkomitierenden Schielens. Von Gustav Cæsar in Marburg a.d. Lahn. Price M.1.50.

MASSON ET CIE, Paris.

Encyclopédie Scientifique des Aide-Mémoire. Publiée sous la Direction de M. Léauté, Membre de l'Institut. Microbiologie de la Syphilis. Par le Dr. A. Sézary, Chef de Clinique à la Faculté de Médecine de Paris. Price, paper, Fr.2.50; boards, Fr.3.

OLIVER AND BOYD, Edinburgh.

The Transactions of the Edinburgh Obstetrical Society. Vol. XXXVII. Session 1911–1912. Price not stated.

PAUL, STANLEY, AND CO., 31, Essex-street, Strand, London, W.C.

The Physiology of Faith and Fear, or the Mind in Health and Disease. By William S. Sadler, M.D., Professor of Physiologic Therapeutics, the Post-Graduate Medical School of Chicago, Director of the Chicago Institute of Physiologic Therapeutics. Price not stated.

POWER LAUNDRY, THE, 89, Farringdon-street, London, E.C.

Dry Cleaning and Garment Drying. With Appendix on Wet Cleaning. An Elementary Text-book. Edited by C. F. Townsend, F.C.S. (The Power Laundry Handbooks, No. 3.) Price 1s. net.

RALPH, HOLLAND AND CO., Temple Chambers, London, E.C.

Educational Administration and Criticism. A Sequel to the "Holmes Circular." By F. H. Hayward, D.Lit., M.A., B.Sc. With a Preface by John Adams, LL.D., M.A., B.Sc., Professor of Education in the University of London. Price 7s. 6d. net.

SMITH, ELDER AND CO., 15, Waterloo-place, London.

A Housemaster's Letters. Price 6s. net.

The Land that is Desolate. An Account of a Tour in Palestine. By Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D., Serjeant-Surgeon to H.M. the King, Surgeon in Ordinary to H.M. Queen Alexandra. With 43 Illustrations from photographs by the Author, and a Map. Price 9s. net.

SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, London and Brighton. GORHAM, E. S., New York.

The Romance of Science. Radium and Radioactivity. By A. T. Cameron, M.A., B.Sc., Lecturer in Physiological Chemistry, University of Manitoba; formerly 1851 Exhibition Scholar and Carnegie Research Fellow of the University of Edinburgh. Price 2s. 6d.

SOCIETY FOR THE PROPAGATION OF THE GOSPEL IN FOREIGN PARTS, 15, Tufton-street, Westminster, London, S.W.

The Claim of Suffering: A Plea for Medical Missions. By Elma K. Paget. Price 1s. 6d. net.

STANLEY PUBLISHING CO., LIMITED, 145, Fleet-street, London, E.C.

Practical Household Management. By M. A. Fairclough, L.C.A., Lady Principal of the Gloucester-road School of Cookery, London, S.W., Author of "The Ideal Cookery Book." Price 2s. net.

TAYLOR AND FRANCIS, Red Lion Court, Fleet-street, London.

University of London, University College. Calendar. Session MDCCCCXII–MDCCCCXIII. Price not stated.

UNIVERSITY OF LONDON PRESS, HODDER AND STOUGHTON, London.

Congress of the Universities of the Empire. 1912. Report of Proceedings. Edited by Alex. Hill, M.A., M.D., F.R.C.S., Secretary to the Congress. Price 10s. net.

VIGOT FRÈRES, Paris.

Clinique et Thérapeutique Obstétricales du Praticien. Par P. Rudaux, Accoucheur des Hôpitaux de Paris. Avec la Collaboration de A. Gros-e, Professeur suppléant d'Accouchements à l'Ecole de Médecine de Nantes; et V. Le Lorier, Ancien Chef de Clinique d'Accouchements à la Faculté de Médecine de Paris. Price Fr.8.

VOGEL, F. C. W., Leipzig.

Medizinisch-Chemisches Laboratoriums-Hilfsbuch. Von Dr. med. et Phil. Ludwig Pincussohn. Price, bound, M.13.50.

WILSON, EFFINGHAM, 54, Threadneedle-street, London, E.C. STEVENS AND SONS, LIMITED, 119 and 120, Chancery-lane, London, W.C.

Income Tax. A Concise Exposition of the Law and Practice Thereof. By Thomas C. Jarvis, B.A., LL.B., Barrister-at-Law. Price 6s. net,

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

Pye's Surgical Handicraft: A Manual of Surgical Manipulations, Minor Surgery, and Other Matters connected with the Work of House Surgeons and Surgical Dressers. Edited and largely rewritten by W. H. Clayton-Greene, B.A., M.B., B.C. Cantab., F.R.C.S. Eng., Surgeon to St. Mary's Hospital; Lecturer on Surgery in the Medical School. Sixth edition. Fully revised, with some additional matter and illustrations. Price 12s. 6d. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BOYD, SIDNEY, M.S. Lond., F.R.C.S. Eng., has been appointed Lecturer on Applied Anatomy at King's College.

CANDLER, A. L., M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Medical Officer to the Exeter Dispensary.

EVERIDGE, J., F.R.C.S., has been appointed Sambrooke Surgical Registrar at King's College Hospital.

GATES, MABEL EMILY, M.D., B.S. Lond., has been appointed Medical Officer to the Exeter Dispensary.

HAWKES, MARY COGHILL, M.D., has been appointed Superintendent of the Physical Exercise and Massage Department at the Royal Free Hospital.

MABLE, SAMUEL, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Districts of Buckfastleigh, Dean Prior, and Holne, by the Totnes (Devon) Board of Guardians.

NIALL, EUGENE M., M.D. Lond., has been appointed Honorary Physician to the Westminster General Dispensary.

OPIE, PHILIP ADAMS, M.B., B.C. Cantab., has been appointed Resident Medical Officer at the Queen Victoria Memorial Hospital, Nice.

RAY, J. H., M.B., B.S. Vict., F.R.C.S. Eng., has been appointed one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 8.

WINTLE, COLSTON, L.R.C.P. Lond., M.R.C.S., has been reappointed Chairman of the Bristol Health Committee.

WOODCOCK, H. DE CARLE, M.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S. Glasg., M.R.C.S., has been appointed Chief Dispensary Medical Officer by the Leeds Corporation Sanitary Committee.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD UNION INFIRMARY AND SANATORIUM.—Junior Resident Assistant Medical Officer (female). Salary £110 per annum, with board, washing, and apartments.

BIRMINGHAM GENERAL HOSPITAL.—Resident Surgical Officer. Salary £100 per annum, with board, residence, and washing.

BIRMINGHAM, ROMSLEY HILL SANATORIUM FOR CONSUMPTIVES.—Medical Superintendent. Salary £350, with board and residence.

BIRMINGHAM, SALTERLEY GRANGE SANATORIUM FOR CONSUMPTION, near Cheltenham.—Resident Medical Officer. Salary £300 per annum, with board, &c.

BIRMINGHAM, UNIVERSITY OF.—Lecturer in Physiology. Salary £200 per annum.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer and Pathologist. Salary £160 per annum, with quarters, board, laundry, and attendance.

BRADFORD HOSPITAL AND WORKHOUSE.—Assistant Resident Medical Officer. Salary £130 per annum, with rations, apartments, and laundry.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer for five months. Salary at rate of £50 per annum, with board, apartments, and laundry.

BUCKINGHAM, COUNTY OF.—Tuberculosis Officer. Salary £500 per annum.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon for six months. Salary £70 per annum.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—Two Resident Medical Officers, unmarried. Salary £90 per annum, with board, lodging, and washing.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £150 per annum, with apartments.

CARMARTHEN, JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary £160 per annum, with board, lodging, washing, &c.

CATERHAM ASYLUM, Caterham, Surrey.—Third Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant for three months.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Physician. Salary £80 per annum, with board, residence, and washing.

CORNWALL COUNTY COUNCIL.—Tuberculosis Medical Officer. Salary £500 per annum.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon. Salary £90 per annum, with rooms, board, washing, and attendance.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, and washing. Also Medical Radiographer. Salary at rate of £75 per annum. Also Clinical Assistants in the Out-patient Departments.

GENERAL LYING-IN HOSPITAL, York-road, S.E.—Resident Medical Officer for three months. Salary £50 per annum, with board.

GLASGOW, GARTLOCH MENTAL HOSPITAL.—Junior Resident Assistant Medical Officer. Salary £150 per annum.

HALIFAX ROYAL INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HASTINGS, EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary at rate of £70 per annum, with residence, board, and washing.

HEREFORD COUNTY AND CITY ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, washing, &c.

HEREFORD, HEREFORDSHIRE GENERAL HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £120 per annum, with board, apartments, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Surgeon, unmarried, for six months. Salary £30, with board, residence, and washing allowance.

INDIAN MEDICAL SERVICE.—Twelve Commissions.

LANCASTER COUNTY ASYLUM.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, and attendance.

LANCASHIRE COUNTY COUNCIL.—Tuberculosis Officer. Salary £500 per annum.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—House Surgeon for six months. Salary at rate of £50 per annum, with board.

LEICESTER, LEICESTERSHIRE AND RUTLAND ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and laundry.

LINCOLN, STATE CRIMINAL LUNATIC ASYLUM, Rampton, South Leverton.—Assistant Medical Officer, unmarried. Salary £225 per annum, with quarters, coal, light, and attendance.

LIVERPOOL STANLEY HOSPITAL.—House Surgeon. Salary £75 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Resident Medical Officer. Salary £200 per annum, with board, lodging, and washing.

MANCHESTER, HULME DISPENSARY, Dale-street, Stretford-road.—House Surgeon. Salary £160 per annum, with apartments, attendance, coal, and gas.

MANCHESTER WORKHOUSE, Crumpsall.—Junior Resident Assistant Medical Officer, unmarried. Salary £110 per annum, with rations, apartments, fire, light, and attendance.

MIDDLESBROUGH, COUNTY BOROUGH OF.—Chief Tuberculosis Medical Officer. Salary £450 per annum.

MIDDLESBROUGH COUNTY BOROUGH EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum.

MIDDLESEX COUNTY ASYLUM (near Wandsworth Common Station).—Third Assistant Medical Officer. Salary £200 per annum, with board, lodging, &c.

MIDDLESEX, COUNTY COUNCIL OF.—Assistant County Medical Officer of Health. Salary at rate of £350 per annum.

PRESTON COUNTY ASYLUM, Whittingham.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Surgeon and House Physician, each for six months. Salaries at rate of £80 per annum, with board, residence, and washing.

ROCHDALE INFIRMARY.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with board, lodging, and washing.

ST. BARTHOLOMEW'S HOSPITAL.—Surgeon.

SEAMEN'S HOSPITAL SOCIETY, DREADNOUGHT HOSPITAL, Greenwich.—Medical Registrar. Salary £100 per annum, with luncheon.

SHEFFIELD ROYAL INFIRMARY.—Honorary Physician and Honorary Assistant Surgeon. Also House Surgeon. Salary £80 per annum.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY.—Assistant or Second Resident Medical Officer. Salary £120 per annum, with board, apartments, and attendance.

SWANSEA GENERAL AND EYE HOSPITAL.—Three House Surgeons and one House Physician. Salary £75 each per annum, with board, washing, and attendance.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Physician, unmarried. Salary £100 per annum, with board, residence, &c.

UNIVERSITY OF LONDON.—Examiners.

WELLS, SOMERSET AND BATH ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £135 per annum, with board, lodging, washing, and attendance.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House Surgeon and Anæsthetist, unmarried. Salary £75 per annum, with board, residence, and washing.

WEST RIDING OF YORKSHIRE.—Tuberculosis Officers. Salary £400 per annum each.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.

WREXHAM, BOROUGH OF.—Medical Officer of Health and School Medical Officer. Salary £150 per annum.

WREXHAM INFIRMARY.—House Surgeon. Salary £120 per annum, with board, lodging, and washing.

WREXHAM RURAL DISTRICT COUNCIL.—Medical Officer of Health and Medical Superintendent of the Joint Fever Hospital. Salary £300 per annum.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Acts at Horsmonden, in the county of Kent; and at Caldbeck, in the county of Cumberland.

Births, Marriages, and Deaths.

BIRTHS.

CAZENOVE.—On Nov. 28th, at West Norwood Lodge, Knight's Hill, West Norwood, the wife of W. R. Cazenove, M.R.C.S., L.R.C.P., of a daughter.

KIRK.—At Edenchoille, Grantown-on-Spey, on Nov. 30th, to Dr. and Mrs. Kirk, Penang, Straits Settlements, a daughter.

MARRIAGES.

FORD—HOILE.—On Nov. 30th, at the Parish Church, Wimbledon, Frank C. Ford, M.B., to Elizabeth Stirling Burns, widow of Brigade-Surgeon Lieutenant-Colonel Edmond Hoile.

DEATHS.

BIRCH.—On Nov. 27th, at London, Lieutenant-Colonel Edward Alfred Birch, M.D., F.R.C.S., Indian Medical Service (retired).

EVANS.—On Nov. 29th, suddenly, at Broomfield, Crosby-road North, Waterloo, Lancs., John Henry Evans, M.R.C.P., in his 73rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A NEW MEDICAL JOURNAL IN ESPERANTO.

Kuracisto: Internacia Medicina Monata Revuo, is the name of a new medical journal published in Esperanto, the second number of which, dated November, 1912, lies before us. It is published in Warsaw, and is edited by Dr. L. Chybczynski, assisted by an editorial staff that seems to cover a large part of the civilised world. The yearly subscription is 6*s*. The contents of this number are Extra-uterine Pregnancy, by Dr. A. Fisher, of Tiflis, Caucasus, and the Treatment of Tuberculosis with Tuberculin Preparations, by Dr. Karl E. Weiss, of Gmünd, Schwabia. Then follows an international inquiry into the conditions relating to the subordinate medical personnel, nurses, male and female, attendants on the insane, and so forth, in various countries, the object being to establish what classes of such helpers are to be found in each country, their culture, education, and legal qualification, their clothing, board, and lodging, their duties and free time, pay, pension, insurance, and other matters. As is here quite rightly pointed out, the efficiency of medical treatment consists of something more than a medical man's examination and prescription of drugs and regimen, all of which may be nullified unless the care and control of the patient are properly attended to, and the doctor's instructions faithfully and sagaciously carried out. A department of abstracts closes the journal, save for a few miscellaneous notes and some official communications of the Tutmonda Kuracista Esperanta Asocio, whose organ the journal is. There seems to be no great difficulty in adapting the "international auxiliary language" to the technical requirements of medicine, due, no doubt, to the fact that scientific technical terms being practically international as to their roots are easily "esperantised" by modifying them according to the Esperanto phonetic spelling.

PROFESSIONAL MEN AND INCOME-TAX.

To the Editor of THE LANCET.

SIR,—In arranging remuneration with the Government, professional men should exact the highest terms possible because it costs them more to live than formerly. Not only is the professional man taxed at 14*d*. in the £ (subject to the usual exemptions and abatements) on his invested savings while he is in practice, but on retirement he is still charged at the same figure. Contrast this treatment with that accorded to pensioners, both official and private. They pay no tax on the sums which have to be put by to provide for their pensions, and when they receive their pensions these are charged at 9*d*. only, on the ground that it is "deferred pay" and they have earned it. It may be said that pensions are different from capital since they cannot be willed away or otherwise disposed of; but if, to make a parallel case, a medical man invests his savings in an annuity, this will be charged at 14*d*. These things should be borne in mind at the present juncture. Another matter which should be more generally known by the medical man travelling abroad is that in the Finance Act, 1909-10, he may not live abroad and still claim the statutory allowances. If he has a fixed residence in the United Kingdom always available for his own occupation he may spend the greater part of the year abroad, even 11 months; but if he lives in occasional residences at home, such as boarding-houses, hotels, &c., the case is different. He may then take one definite trip of six months or more abroad, but if he pays more than one trip the days will be counted, and if the total is greater than six months in the taxable year, and continuous from year to year, he may entirely forfeit his claim for income-tax abatement or exemption.—I am, Sir, yours faithfully,

Dec. 2nd 1912. J. WESTON BULL, M.D., M.R.C.S., L.R.C.P.

DOLLS.

THE *Truth* Doll Show has continued its useful but unostentatious career annually since 1880, and the coming show on Dec. 18th and 19th at the Royal Albert Hall will include, among other things, a group of dolls presented by the Queen. "The *Truth* History of Dolls," by Muriel Harris (London: *Truth* Publishing Co., Limited. Pp. 44. Price 6*d*.), is a fitting accompaniment thereto, giving much interesting information about dolls—prehistoric, Egyptian, Babylonian, Greek, Roman, Indian, French, German, English, prehistoric American, and Esquimaux—illustrated with quaint outline drawings. Time was when grown-up people, not only women, but men, took joy in their collections of dolls, and of some of the more notable of these we learn something in this dainty pamphlet. Even the stern Mahomet, it is said, was seduced from the strict paths mapped out by his own Koran to "play dolls" with his nine-year-old wife, Ayesha. Of the psychological import of dolls we cannot here speak at length, but the following words with which the author opens her little book put the matter pithily. She says: "If the child is father to the man, the doll is grandmother to the woman. The whole development of womankind might be traced back to the doll who educated the child who educated her mother who gave her the doll, and so round the circle again."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced:—

Dec. 31st-Jan. 11th, 1913 (London, Olympia).—Children's Welfare Exhibition.

In 1913:—

March 17th-20th (Paris).—International Congress of Physical Education.

(Easter week) (Berlin).—Fourth International Congress for Physiotherapy.

April 26th (Ghent) (opens).—International Exhibition.

July 7th-12th (Exeter).—Twenty-eighth Congress of the Royal Sanitary Institute.

Aug. 6th-12th.—(London).—Seventeenth International Congress of Medicine.

Sept. 2nd-6th (Groningen).—International Physiological Congress.

" 22nd-28th (Milan).—Fourteenth International Anti-alcoholic Congress.

September (Birmingham).—British Association.

(London).—Historical Medical Exhibition. (Organised by Mr. Henry S. Wellcome.)

(London).—International Historical Congress.

(Chicago).—Congress of the International Association of Refrigeration.

(Washington).—Congress of American Physicians and Surgeons.

(Paris).—Congress of Physical Education.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

TUESDAY.

SECTION OF PSYCHIATRY (Hon. Secretaries—R. H. Cole, Bernard Hart): at 4.30 P.M.

Clinical Meeting at Bethlem Royal Hospital, S.E.

Cases:

Dr. W. H. B. Stoddart, Dr. J. G. P. Phillips, and Dr. R. Brown:—(1) Acute Confusional Insanity Relieved by Amylene Hydrate; (2) Acute Confusion in a Child of 12; (3) Maniacal Depressive Insanity (resembling G.P.); (4) Pre-senile Katatonia; (5) Senile Dementia with Apraxia; (6) Case for Diagnosis; (7) Œdema of the Thighs in a Katatoniac.

SECTION OF SURGERY (Hon. Secretaries—James Berry, J. Murray): at 5.30 P.M.

Papers:

Mr. Lawrie McGavin: The Results of Filigree Implantation in the Radical Cure of Hernia.

Dr. Arthur F. Hertz: The Cause and Treatment of Certain After-effects of Gastro-enterostomy.

THURSDAY.

SECTION OF BALNEOLOGY AND CLIMATOLOGY (Hon. Secretary—Chas. W. Buckley): at 5.30 P.M.

Paper:

Dr. William Bain (Harrogate): The Medical Treatment of Gall-stone Disease.

FRIDAY.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—H. S. Clogg, F. Langmead, P. N. Blake-Odgers): at 4.30 P.M.

Discussion:

On the Treatment of Heart Disease in Children (opened by Dr. Edmund Cautley and Dr. James Mackenzie).

The following will take part in the discussion:—Dr. John Hay (Liverpool), Dr. C. W. Chapman, Dr. Walter Carr, Dr. Sutherland, Dr. Alexander Morison, Dr. Poyntoa, and Dr. F. W. Price.

CLINICAL SECTION (Hon. Secretaries—Charles H. Fagge, W. Essex Wynter): at 8.30 P.M.

Cases:

Mr. Ralph Thompson: Two Cases of Prostatic Calculus with Skiagrams.

Mr. Parkes Weber: (1) Two Cases of Family Cerebellar Ataxia; (2) Two Cases of Cervical Ribs with Atrophic Changes in Hands.

Mr. T. H. Kellock: A Patient after Pneumonotomy for Foreign Body in Bronchus.

Dr. Essex Wynter: Case of Subcutaneous Drainage for Ascites. And other Cases.

Paper:

Mr. T. H. Kellock: Pneumonotomy.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Discussion on Intestinal Stasis (introduced by Mr. W. A. Lane). Followed by Dr. A. C. Jordan, Dr. H. Chapple, Dr. M. Leslie, Mr. L. E. Creasy, Dr. Distaso, Mr. B. Ward, Dr. Schlesinger, Mr. H. Sampson, Mr. G. E. Waugh, Dr. Ofenheim, and Mr. E. M. Corner.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, Lecture Theatre of the Society, 17, Bloomsbury-square, W.C.

TUESDAY.—8 P.M., Dr. O. T. Williams: Cod Liver Oil (illustrated by lantern slides).—Mr. W. H. Martindale: Digitalis Assay.

HUNTERIAN SOCIETY, St. Bartholomew's Hospital, E.C.

WEDNESDAY.—9 P.M., Clinical and Pathological Evening.

UNITED SERVICES MEDICAL SOCIETY, Royal Naval Medical School, Greenwich.

WEDNESDAY.—5 P.M., Fleet-Surgeon Munday, R.N.: Persian Gulf Experiences.

CHILD STUDY SOCIETY, LONDON, Royal Sanitary Institute, 90, Buckingham Palace-road, S.W.

THURSDAY.—7.30 P.M., Dr. C. S. Myers: The Psychology of Music.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne-street, Edgware-road, W.

THURSDAY.—8.30 P.M., Mr. C. W. M. Hope: Pus in the Nose.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. G. Pernet: Clinique (Skin). 5.15 P.M., Lecture:—Dr. W. Carr: Pneumonia and Emphysema in Children.

TUESDAY.—4 P.M., Dr. T. Thompson: Clinique (Medical). 5.15 P.M., Lecture:—Dr. H. Mackenzie: Artificial Pneumothorax.

WEDNESDAY.—4 P.M., Mr. G. E. Waugh: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. A. B. Giles: Minor Gynæcological Operations.

THURSDAY.—4 P.M., Mr. H. Lett: Clinique (Surgical). 5.15 P.M., Dr. J. F. Wethered: The Early Recognition of Pulmonary Tuberculosis.

FRIDAY.—4 P.M., Mr. J. G. French: Clinique (Ear, Nose, and Throat). 5.15 P.M., Lecture:—Dr. W. Wingrave: Blood Pictures.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 11 A.M., Mr. Addison: Demonstration of Minor Operations. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Morton: The Use of Solid Carbon Dioxide Snow.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Armour: Abdominal Emergencies.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. Souttar: Demonstration of Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Addison: Acute Inflammatory Diseases of Bones.

THURSDAY.—10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Lecture:—Dr. Owen: Practical Medicine. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. T. Gray: Abdominal Pain.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. Souttar: Demonstration of Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. G. Holmes: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Bigg: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. Singer: Medical. Mr. A. J. Walton: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.30 P.M., Special Lecture:—Sir James M. Davidson: Stereoscopic Method in X Ray Examination and Precise Localisation.

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Mr. P. Cole: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 2.15 P.M., Mr. C. C. Choyce: Surgery.

THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. G. Holmes: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Bigg: Throat, Nose, and Ear.—2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. Dr. A. Davies: Pathological Demonstration. 3.15 P.M., Special Lecture:—Dr. R. Wells: Graphic Records of Heart Sounds and Murmurs. 4.30 P.M., Special Lecture:—Mr. James Cantlie: The Surgical Aspects of Some Tropical Ailments.

FRIDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. Singer: Medical. Mr. A. J. Walton: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine. 3.15 P.M., Mr. L. McGavin: Surgery.

SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Mr. P. Cole: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—10 A.M., Dr. W. Steuart: Radiography.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. R. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).

TUESDAY.—Clinic; 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Mr. Howell Evans: Tuberculosis of the Urinary Tract.

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture:—Mr. W. Steuart: Diagnosis by Bismuth X Rays.

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Clinical Pathology and Pathological Demonstration (Dr. W. A. Duncan).

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.

MONDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. M. Leslie; Room IV., Dr. S. Thompson. 4 P.M., Wards, Dr. M. Leslie. 4.30 P.M. to 5.30 P.M., Lecture Hall, Lecture-Demonstration.

TUESDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. Phear; Room IV., Dr. B. King. 2 P.M., Operations and Throat Clinic, Mr. A. Evans. 3 P.M., Wards, Dr. White. 3.30 P.M., Wards, Dr. Phear. 4.30 P.M., to 5.30 P.M., Lecture Hall, Lecture-Demonstration.

WEDNESDAY.—2 P.M., Wards, Dr. A. Davies. Out-patient Department—Room III., Dr. Drysdale; Room IV., Dr. Kellie. 4 P.M., Wards, Dr. Drysdale. 4.30 P.M., Roentgen Ray Department, Dr. Jordan. 7 P.M., Department for the Prevention of Consumption.

THURSDAY.—9.30 A.M., Dental Department, Mr. G. Thomson. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department—Room III., Dr. M. Leslie; Room IV., Dr. S. Thompson. 4.30 P.M. to 5.30 P.M., Lecture Hall, Lecture-Demonstration.

FRIDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Wards, Dr. Calvert. Out-patient Department—Room III., Dr. Phear; Room IV., Dr. B. King. 3.30 P.M., A Special Clinical Demonstration by one of the Out-patient Physicians.

SATURDAY.—10 A.M., Out-patient Department—Room III., Dr. Drysdale; Room IV., Dr. Kellie. 11.30 A.M., Roentgen Ray Department, Dr. Jordan.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.

THURSDAY.—4 P.M., Dr. Voelcker: Demonstration of Selected Medical Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY AND FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. J. Taylor: Clinical Cases.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4.30 P.M., Lecture:—Dr. Bosanquet: Affections of the Œsophagus.

QUEEN'S HOSPITAL FOR CHILDREN, Board Room of the Hospital, Hackney-road, N.E.

TUESDAY.—4 P.M., Mr. A. S. B. Blankart: The Treatment of Club Foot.

LISTER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea Gardens, Chelsea Bridge road, S.W.

WEDNESDAY AND FRIDAY.—4 P.M., Lecture:—Dr. Penfold: Studies in Bacterial Variation.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—2 P.M., Dr. W. Griffith: The Pathology of the Skin.

THURSDAY.—6 P.M., Dr. M. Dockrell: Bullous and Vesicular Eruptions:—I., Urticaria; II., Pemphigus; III., Pompholyx; IV., Varicella.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Mr. W. R. Douglas: Differential Diagnosis of Moveable Kidney and its Treatment. (Post-Graduate Clinic.)

MANCHESTER ROYAL INFIRMARY.

TUESDAY.—4.30 P.M., Dr. Fothergill: Gynæcological Cases. (Post-Graduate Clinic.)

FRIDAY.—4.30 P.M., Dr. Milligan: Some Common Forms of Nasal Obstruction. (Post-Graduate Clinic.)

SALFORD ROYAL HOSPITAL.

TUESDAY.—Mr. R. Ollerenshaw: Differences in Appendicitis in Children and Adults. (Post-Graduate Demonstration.)

For further particulars of the above Lectures, &c., see Advertisement Pages.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M. Aural and Ophthalmic), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M and 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (14th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.) Hospitals operations are performed daily. At the Western Ophthalmic Hospital operations are performed on Monday, Tuesday, Thursday, and Friday at 3 P.M., and on Wednesday and Saturday at 11 A.M.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 4th, 1912.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 28	29·79	W.	...	44	44	33	33	34	Foggy
,, 29	29·16	S.E.	0·37	47	45	34	43	43	Raining
,, 30	29·48	N.E.	0·07	41	37	33	33	34	Overcast
Dec. 1	29·83	W.	...	41	39	29	—	30	Fine
,, 2	29·76	W.	0·20	61	47	30	39	40	Fine
,, 3	30·37	W.	...	51	51	39	38	39	Foggy
,, 4	30·30	S.W.	0·05	57	53	39	50	51	Overcast

The following journals, magazines, &c., have been received.—Archives of the Roentgen Ray, South African Medical Record, Archives of Diagnosis, Indian Medical Gazette, Indian Medical Record, Revue d'Hygiène, Prescriber, Peru To-day, Archives Générales de Médecine, Annali di Medicina Navale e Coloniale, Archives de Médecine et Pharmacie Navales, American Journal of Orthopedic Surgery, Therapeutic Gazette, Review of Neurology and Psychiatry, Polyclinico, Annales de Gynécologie et d'Obstetrique, Edinburgh Medical Journal, St. Bartholomew's Hospital Journal, Local Government Review, Journal of the Royal Sanitary Institute.

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